

GEN  
WVD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III

841 Chestnut Building  
Philadelphia, Pennsylvania 19107

SUBJECT: RCRA Inspection

*Triangle PWC  
Glendale WV*

DATE: 8/3/88

FROM:

*DAD*  
Douglas A. Donor, Environmental Scientist  
DELMARVA, DC/WV RCRA Enforcement Section (3HW15)

*WVD 00 431 4928*

TO:

FILE

*ppr 8/19/88*  
Victoria P. Binetti, Chief  
DELMARVA, DC/WV RCRA Enforcement Section (3HW15)

BASED UPON REVIEW OF THE RCRA INSPECTION REPORT FOR THE FACILITY  
REFERENCED ABOVE, I HAVE DETERMINED THAT NO FURTHER ACTION IS REQUIRED  
AT THIS TIME.

*CE SQG In Compliance*



STATE OF WEST VIRGINIA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WASTE MANAGEMENT  
1260 Greenbrier Street  
Charleston, West Virginia 25311

ARCH A. MOORE, JR.  
Governor

RONALD R. POTESTA  
Director

ROBERT K. PARSONS  
Deputy Director

July 11, 1988

Mr. Bob Green  
Triangle PWC, Inc.  
1701 Wheeling Avenue  
Glen Dale, West Virginia 26038

Dear Mr. Green:

Enclosed is a copy of the "Compliance Evaluation Inspection" Report completed on your facility by representatives of the Chief of the Division of Waste Management. This report is based on the inspection conducted on June 21, 1988.

There were no areas of non-compliance of the appropriate Hazardous Waste Regulations documented during this inspection.

Thank you for your assistance and cooperation during this inspection. If you have any questions concerning the inspection or attached report, please feel free to contact this office at 304/348-5929.

Sincerely,

DIVISION OF WASTE MANAGEMENT

A handwritten signature in cursive script that reads "Ava C. Zeitz".

Ava C. Zeitz  
Compliance Monitoring and  
Enforcement Section Leader

RCRA COMPLIANCE SECTION  
RECEIVED

JUL 22 1988

ACZ/pd  
Enclosure

cc: Doug Donor, EPA, Region III  
James Fenske, Inspector

INSPECTION FACT SHEET

COMPANY NAME: Triangle PWC, Inc.

I. D. #: WVD004314928

MAILING ADDRESS: 1701 Wheeling Avenue  
Glen Dale, WV 26038

TYPE OF FACILITY: Conditionally Exempt  
Small-Quantity Generator

LOCATION:

COUNTY: Marshall

COMPANY CONTACT: Mr. Bob Green  
Plant Engineer

HANDLING CODES: S02

PHONE: (304) 845-4020

PURPOSE: Compliance Evaluation Inspection

APPLICABLE REGULATIONS: West Virginia Hazardous Waste Management Act, Chapter 20-5E;  
West Virginia Administrative Regulations for Chapter 20-5E;  
and/or 40 CFR Part 265.

LIST OF CHEMICALS:

(For Small Quantity Generators, list amount of waste, how it is handled, where it goes)

|      |               |              |
|------|---------------|--------------|
| D001 | 4 drums/month | Safety-Kleen |
|------|---------------|--------------|

DATE INSPECTED: June 21, 1988

INSPECTOR(S): (1) James R. Fenske, West Virginia Department of Natural Resources,  
Division of Waste Management

(2)

(3)

DATE PREPARED: June 27, 1988

PREPARED BY: James R. Fenske, West Virginia Division of Waste Management

## Inspection Report

RE: Triangle PWC, Inc., Glen Dale, WV004314928

DATE INSPECTED: June 21, 1988

INSPECTOR: James R. Fenske, West Virginia Division of Waste Management

DATE PREPARED: June 27, 1988

PREPARED BY: James Fenske

On June 21, 1988 at approximately 1400 hours the above referenced inspector conducted a Compliance Evaluation Inspection of the Triangle PWC facility, Glen Dale, West Virginia. Upon my arrival, I was met by Mr. Bob Green, Plant Engineer who had not previously been advised of my intentions to inspect the facility.

Upon presentation of the appropriate credentials I advised the company official of my authority as a representative of the Chief of the Division of Waste Management pursuant of Chapter 20 of the Code of West Virginia and as specified in Section 3007(a) of the Resource Conservation and Recovery Act and he acknowledged my authority. The company official was informed this inspection would emphasize the facility's compliance with the Hazardous Waste Management Act (Chapter 20, Article 5E) and the regulations promulgated thereunder.

There have been no changes at the facility since the last inspection (see Compliance Evaluation Inspection dated March 6, 1987). The facility is continuing to utilize a second EPA identification number (WVD082968389) which was inadvertently assigned. The facility should discontinue utilizing this number and begin using its original number (WVD004314928) which has been reactivated. Hazardous wastes generated at the facility include four Safety-Kleen units containing mineral spirits (D001). The facility also utilizes Chloro-Solv for electrical parts degreasing. This solvent contains methyl chloroform and ethylene tetrachloride. According to facility representatives, only one-twenty gallon drum of this solvent is used per year and because it is used in such small quantities, no waste is generated.

All other wastestreams are generated from the facility's galvanizing process. The facility possesses two hot dip zinc coating tanks for steel sheet galvanizing and on each hot dip line, the steel sheets are first placed in an HCL bath. Steel pipes are zinc coated on an electroplating line. Prior to electroplating, the steel pipes are treated in sulfuric acid. A boric/sulfuric acid solution tank then acts the media for the zinc electrolysis process. After zinc electroplating, the steel pipes are coated with a nitric acid solution containing chrome which acts as a protectant. Spent hydrochloric acid and sulfuric acid are channelled to the facility's wastewater treatment plant. Also, small amounts of spillage from the nitric acid chrome solution tank is channelled to the treatment plant. According to facility representatives, less than one percent of the sludge generated at the wastewater treatment plant contains any chrome waste and this is in the trivalent form. To ensure all chrome wastes are in trivalent form, the facility mixes chrome wastestreams with discarded acid solutions where any possible hexavalent chrome is reduced by ferrous iron in the acid solution. If any additional hexavalent chrome is

detected, the acid solution is treated with sodium bisulfite. Acid solutions are then neutralized. Sludge is dewatered via filter press prior to disposing of it as a non-hazardous waste in Wheeling Landfill (the sludge has been formerly analyzed for chrome and lead and was found not to be Extraction Procedure Toxic). The sludge, formerly listed hazardous waste K063, was delisted by the Environmental Protection Agency on December 5, 1984 (see March 6, 1987 inspection report for the appropriate delisting documents).

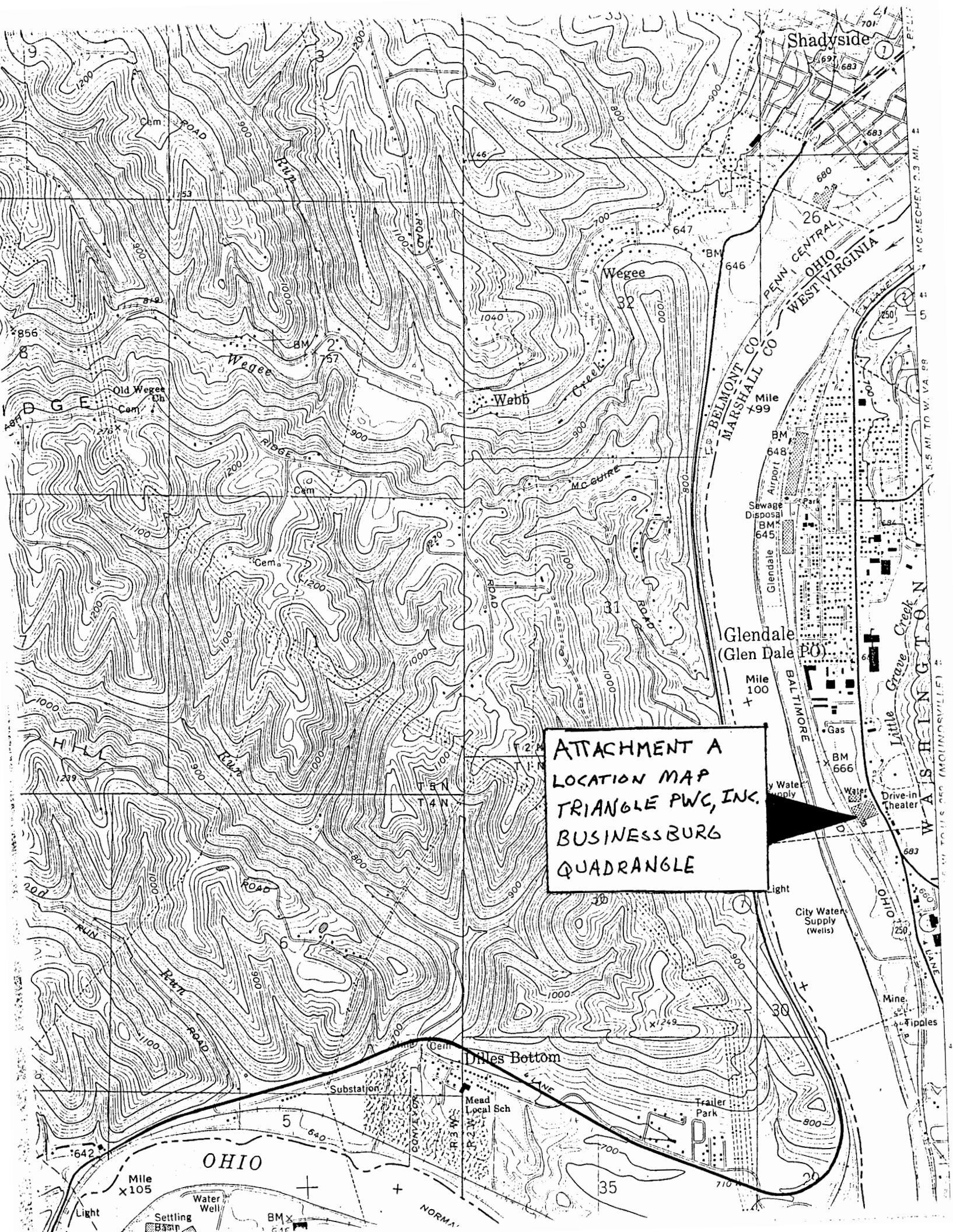
Sludge from the zinc electroplating tank as well as skimmings from the two zinc hot dip tanks is sent to St. Joe's Mineral Resources of Monaca, Pennsylvania for zinc recovery. According to facility representatives, sludge has never been removed from the nitric acid tank which contains chrome.

After examining appropriate documents, we then proceeded to conduct a physical inspection of the facility. During the inspection, approximately three dozen drums were noted at the facility's finished product storage yard. According to Mr. Green, the drums contain waste oil and grease.

After the inspection, I thanked the facility representative for his cooperation and then departed.

#### Compliance Evaluation

No violations of the West Virginia Hazardous Waste Management Regulations were noted.

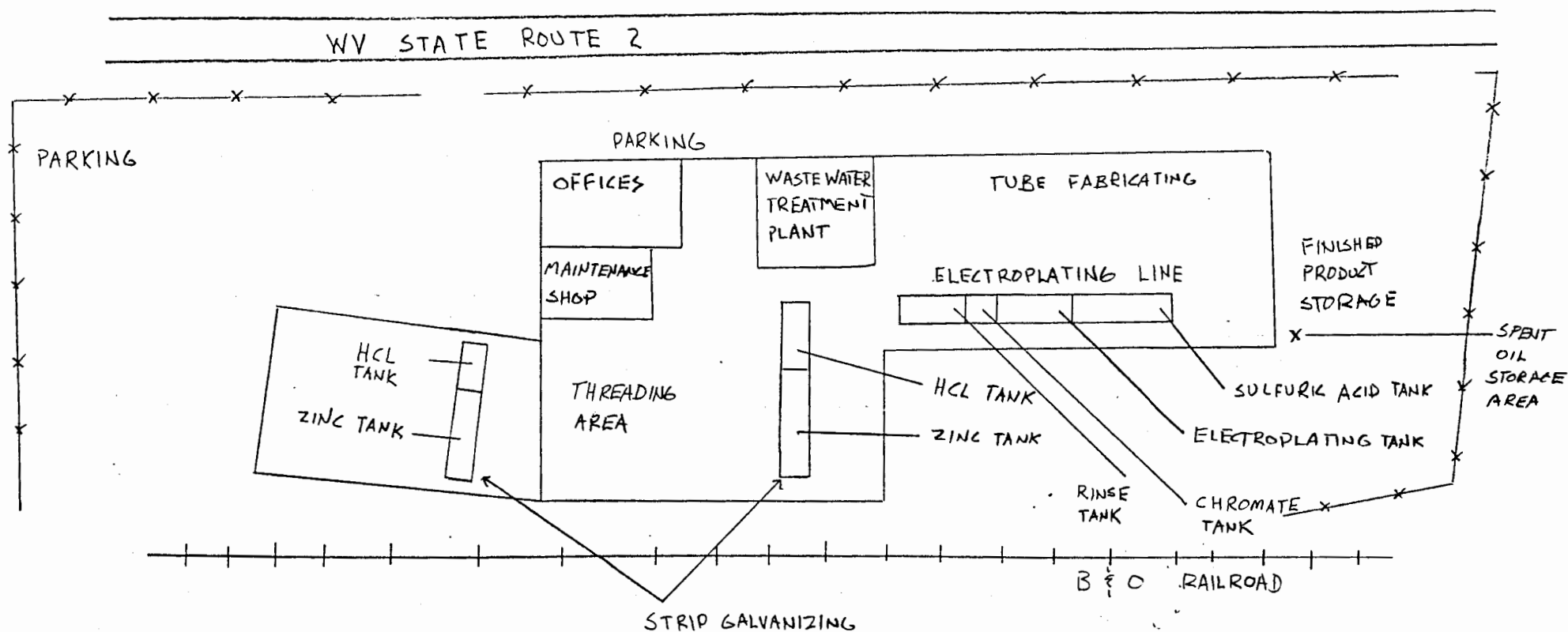
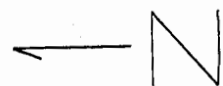


ATTACHMENT A  
LOCATION MAP  
TRIANGLE PWC, INC.  
BUSINESSBURG  
QUADRANGLE

ATTACHMENT - B

SITE MAP

TRIANGLE PWC INC



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III

841 Chestnut Building  
Philadelphia, Pennsylvania 19107

SUBJECT: RCRA Inspection *TRIANGLE PWC, INC.*  
*Glen Dale, WV*  
*WVP 00 431 4928*

DATE: *5/27/87*

FROM: *[Signature]* Douglas A. Donor, Environmental Scientist  
DELMARVA, DC, WV RCRA Enforcement Section (3HW15)

TO: John A. Armstead, Chief *[Signature]*  
DELMARVA, DC, WV RCRA Enforcement Section (3HW15)

THE STATE IS TAKING ACTION TO RESOLVE THE VIOLATIONS IN THIS  
INSPECTION REPORT.

WE WILL MONITOR THE STATE ACTIVITY REGARDING RESOLUTION OF THESE  
VIOLATIONS.

*Despite information on SWHU like areas, this is a  
Generation Only.  
There is a manifest violation that WV will address.*



RCRA COMPLIANCE SECTION  
**RECEIVED**

MAY 20 1987

STATE OF WEST VIRGINIA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WASTE MANAGEMENT  
1260 Greenbrier Street  
Charleston, West Virginia 25311

ARCH A. MOORE, JR.  
Governor

RONALD R. POJEŠTA  
Director

ROBERT K. PARSONS  
Deputy Director

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

April 28, 1987

Mr. Charles McClarin  
Triangle PWC, Inc.  
1701 Wheeling Avenue  
Glen Dale, West Virginia 26038

Dear Mr. McClarin:

Enclosed is a copy of the "Compliance Evaluation Inspection" (CEI) Report completed on your facility by representatives of the Chief of the Division of Waste Management. This report is based on the inspection conducted on March 6, 1987.

Please refer to the "Compliance Evaluation" section of the report for those violations discovered during the course of this inspection.

A copy of this report will be referred to the Enforcement Unit of this Division with an additional copy transmitted to the United States Environmental Protection Agency (U. S. EPA), Region III. Philadelphia, Pennsylvania.

Thank you for your assistance and cooperation during this inspection. If you should have any questions concerning the inspection or attached report, please feel free to contact this office at 304/348-5929.

Sincerely,

DIVISION OF WASTE MANAGEMENT

Rebecca J. Robertson  
Acting Compliance Monitoring  
and Enforcement Section Leader

RJR/pd

Enclosure

cc: Doug Donor, EPA, Region III  
John Meeks, Enforcement Unit  
James Fenske, Inspector

INSPECTION FACT SHEET

COMPANY NAME: Triangle PWC, Inc.

ID# WVD004314928

ADDRESS: 1701 Wheeling Avenue  
Glen Dale, West Virginia 26038

TYPE OF FACILITY: Small  
Quantity  
Generator

COMPANY CONTACT: Mr. Charles McClarin  
Technical Superintendent

PHONE; (304) 845-4020

PURPOSE: CEI

APPLICABLE REGULATIONS: West Virginia Hazardous Waste Management Act, Chapter 20-5E;  
West Virginia Administrative Regulations for Chapter 20-5E;  
and/or 40 CFR 265.

LIST OF CHEMICALS: D001

DATE INSPECTED: March 6, 1987

INSPECTORS: (1) James R. Fenske, West Virginia Department of Natural Resources,  
Division of Waste Management

(2)

DATE PREPARED: March 9, 1987

PREPARED BY: James R. Fenske, West Virginia Department of Natural Resources,  
Division of Waste Management

TABLE OF CONTENTS

Inspection Report

Attachments:

- A - Location Map
- B - Site Map
- C - Small Quantity Generator Checklist
- D - Container Checklist
- E - Material Safety-Data Sheet
- F - Notification of Hazardous Waste Activity
- G - K063 Sludge Delisting Document
- H - 1983 Cyanide Sludge Manifest
- I - 1986 "Waste Varnish" Manifest

### Inspection Report

RE: Triangle PWC, Inc., Glen Dale, West Virginia - WVD004314928

DATE INSPECTED: March 6, 1987

INSPECTOR: James R. Fenske, West Virginia Department of Natural Resources,  
Division of Waste Management

DATE PREPARED: March 9, 1987

PREPARED BY: James R. Fenske

On March 6, 1987 at approximately 1000 hours, the above referenced inspector conducted a Compliance Evaluation Inspection of the Triangle PWC Corporation, Glen Dale Plant. Upon my arrival I was met by Mr. Charles McClarin who had previously been advised of my intentions to inspect the facility.

Upon presentation of the appropriate credentials, I advised Mr. McClarin of my authority as a representative of the Chief of the Division of Waste Management pursuant of Chapter 20 of the Code of West Virginia and as specified in Section 3007(a) of the Resource Conservation and Recovery Act and he acknowledged my authority. Mr. McClarin was informed this inspection would emphasize the company's compliance with the Hazardous Waste Management Act (Chapter 20, Article 5E) and the regulations promulgated thereunder.

Triangle PWC processes consist of galvinizing and electroplating steel sheets and steel pipes with a zinc coating. The only hazardous wastes generated at this facility consist of four Safety-Kleen drums containing D001 mineral spirits (see Material Safety Data Sheet, Attachment "E"). On the facility's Notification of Hazardous Waste Activity Form (Attachment "F"), Triangle PWC has F002 listed as its hazardous waste and this inspector informed Mr. McClarin on the procedure to amend this notification form.

The waste zinc skimmings from the facility's hot steel dipline are resold to St. Joe's Mineral Resources of Monaca, Pennsylvania for zinc recovery. The waste pickle acids from the galvinizing/electroplating processes are treated at the facility's treatment plant. Lime is added for pH adjustment and the sludge generated is transported to the Wheeling Landfill. Wastewater from the treatment plant is discharged from a permitted NPDES outfall. The sludge generated from the treatment plant was at one time a listed hazardous waste (K063) but has since been delisted (see Attachment "G").

This facility has had to obtain two provisional EPA ID Numbers to transport and dispose of "other" hazardous wastes discovered at the plant that were generated from former plant processes.

CEI (Triangle PWC, Glen Dale Plant, WV, WVD004314928)

Page Two

March 9, 1987

At one time, this facility treated steel in cyanide plating bath solutions and generated F008, hazardous wastes. This process was discontinued approximately 20 years ago according to Mr. McClarin. The cyanide plating lines were left in place until 1983 when Triangle PWC decided to remove the plating lines. While dismantling the plating lines, it was discovered that the plating tanks contained cyanide sludge.

Triangle PWC obtained a provisional ID Number and had the waste manifested to Cecos International (Attachment "H"). Triangle PWC then had the tanks analyzed by Pittsburgh Testing Laboratory for cyanide. Mr. McClarin stated most tanks had between 1.5 to 2.4 ppm of cyanide but one tank had up to 34 ppm. Mr. McClarin stated that he was not sure how to dispose of the plating tanks (as a hazardous or non-hazardous waste). I informed Mr. McClarin that I would try to determine how Triangle PWC should dispose of these tanks and get back to him with an answer.

The second provisional ID Number was obtained when plant officials discovered two underground storage tanks that had not been utilized for approximately 25 years. One tank was empty. The other tank contained 4500 gallons of waste varnish (see Attachment "I"). The varnish was used approximately 20 years ago to coat the inside diameter of steel pipes (versus the cyanide used to coat the outside diameter). These tanks were discovered in the spring of 1986 and the waste varnish was removed and manifested to Huskill Chemical Corporation shortly thereafter for recycling. The varnish was analyzed by Mahoning Paints of Ohio prior to recycling.

While reviewing manifests, it was noted that the manifest dated November 5, 1983 had no EPA ID Number or EPA waste type listed on it (Attachment "H") and that the manifest dated May 5, 1986 also did not have an EPA waste type listed.

After completing the appropriate checklists, we then proceeded to inspect the facility. After the inspection, I thanked Mr. McClarin for his cooperation and then departed.

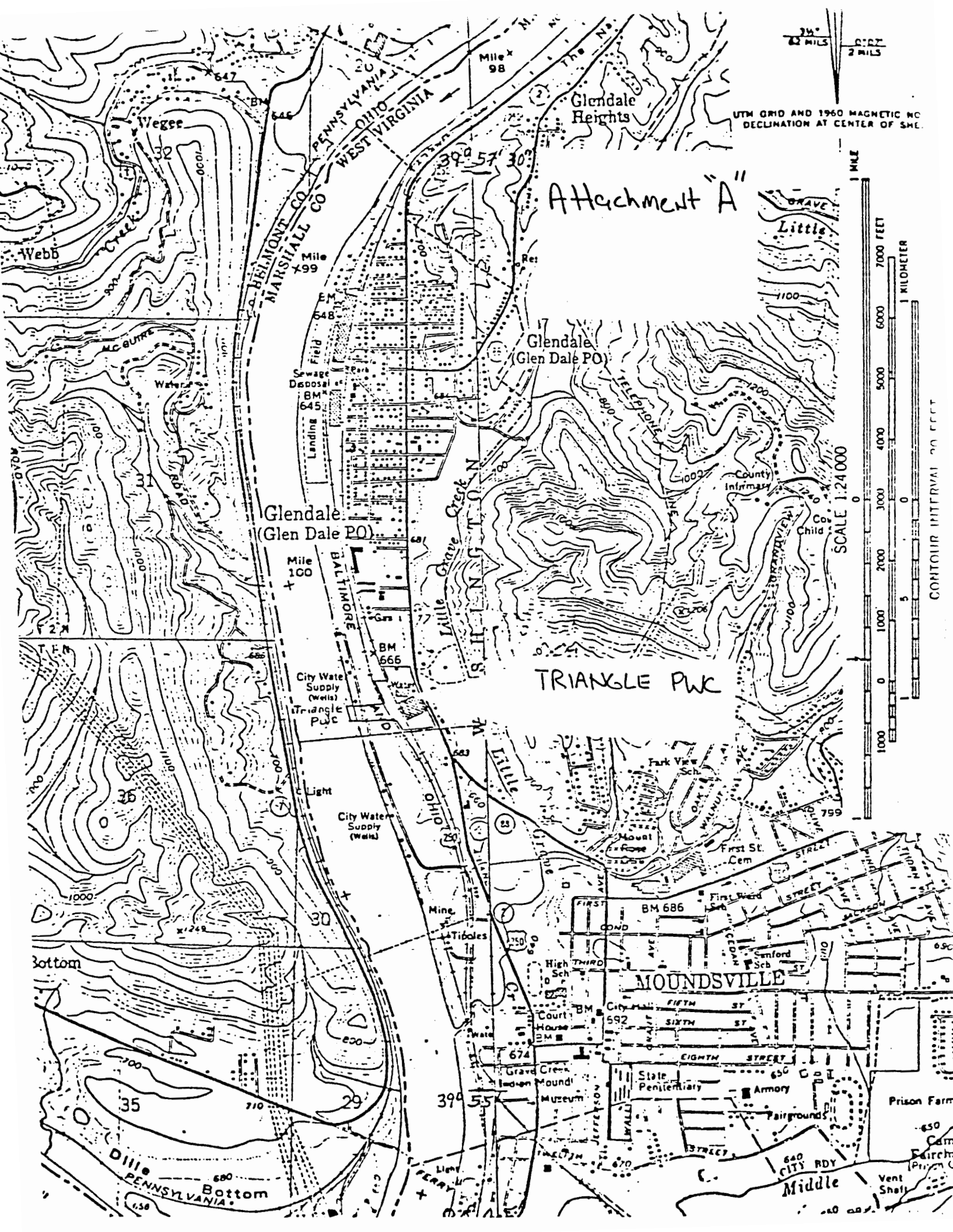
CEI (Triangle PWC, Glen Dale Plant, WV, WVD004314928)

Page Three

March 9, 1987

COMPLIANCE EVALUTION

- 1) This facility did not complete manifests and is therefore in violation of Section 3.1.4.j.1.iii of the regulations promulgated for the West Virginia Hazardous Waste Management Act.



GATE

Route 2

1590'

507'

OFFICES

CENTRAL  
WASTE  
TREATMENT

tube  
Fabricating

PLATING  
TREATMENT AREA

365'

Strip  
Galv.

thread  
&

MAIN  
BUILDING

Metallize

Strip  
Galv.

B&O RAILROAD

315'

245'

790'

PROPERTY BOUNDARY

← N

SCALE : 1 inch = 160 FEET

Attachment "B"

Small Quantity Generator Checklist Attachment C

Facility Name: Triangle PWC, Inc  
Facility I.D. No.: WV0004314928  
Location: Glendale WV 26038 Mailing Address: 1701 Wheeling Ave.  
Company Contact: MR. C. MCCLERIN Title: Technical supervisor  
Phone No.: (304) 845-4020

\* Note: This checklist evaluates compliance with applicable State and Federal requirements

- Generation:
- 1) Has this facility identified all wastes generated? (yes) No
  - 2) Does this facility generate hazardous wastes? (yes) No
  - 3) Type(s) of ~~waste~~ hazardous waste generated:  
Ignitable X Corrosive      Reactive      EP Toxic       
Listed:
  - 4) Quantity of waste generated per month:  
- 0 - 100 kg      - 0 - 1 kg acutely toxic       
- 100 - 1000 kg X - > 1 kg. acutely toxic       
- > 1000 kg
  - 5) Has this facility ever accumulated greater than 1,000 kg. of hazardous waste in one month? yes (No)

NOTE: If hazardous waste generation and/or accumulation exceed 1,000 kg. in one month, proceed to checklist for Generators.

- 6) Has this facility properly notified the W.V. D.N.R. of its hazardous waste activity as required? (yes) No
- 7) Have all hazardous wastes been transported by and disposed of off-site by a permitted transporter and TSD facility? (yes) No

Transporter #1: Name: Safety Klean Corp.  
I.D. No.: WV1081034201  
Phone: 304/233-6567

Transporter #2: Name:       
I.D. No.:       
Phone:     

TSD Facility: Name: Safety Klean Corp.  
I.D. No.: WV1081034201  
Phone: 233-6567  
Address: Wheeling, WV 26062

- 9.3) Are wastes stored on site : yes ☐ No ☒
- > 180 days
  - > 270 days (when the designated TSD facility is greater than 200 miles from the generator) NA yes ☐ No ☐

8.) If NO, how is the waste treated / disposed of :

- on-site permitted disposal \_\_\_\_\_
- on-site recycling \_\_\_\_\_
- off-site recycling X
- POTW \_\_\_\_\_
- uncontrolled sewer / septic system \_\_\_\_\_

10.) Have you ever transported your own hazardous wastes ? yes ☐ No ☒

If so : When : \_\_\_\_\_

Destination : \_\_\_\_\_

#### Transportation:

12.) Prior to shipment, is a uniform hazardous waste manifest accurately completed by the generator? JRF ☒ Yes ☐ No

13.) Is a signed, return manifest copy on file for each hazardous waste shipment? ☒ Yes ☐ No

14.) Are containers holding hazardous waste properly packaged, marked, labelled prior to shipment? ☒ Yes ☐ No

Comment: \_\_\_\_\_

#### Containers:

15.) Are all hazardous waste containers marked with the words "Hazardous Waste"? ☒ Yes ☐ No

16.) Are all hazardous waste containers dated as to when they began accumulating hazardous waste? ☒ Yes ☐ No

17.) Are containers holding hazardous waste managed in such a way so as to prevent leaking, rupturing, corrosion, or other deterioration / failure? ☒ Yes ☐ No

18.) Are all defective containers replaced immediately? ☒ Yes ☐ No

19.) Are containers kept closed, except when filling or emptying? ☒ Yes ☐ No

- 20.) Are all containers inspected weekly for leaks, corrosion, etc. (yes) No
- 21.) Are incompatible wastes stored in the same <sup>no incompatible waste</sup> containers and/or in a manner that might cause leaks, fires, or other releases? NA yes ~~No~~ JRF
- 22.) Are all original hazardous material containers properly emptied so as to meet the regulatory definition of empty prior to disposal? NA yes No  
no containers disposed
- I. Tanks
- 23.) Are all hazardous wastes, treated/stored in tanks, managed so as not to cause tank damage? NA Yes No
- 24.) Is two feet of freeboard maintained? Yes No
- 25.) If the tank has a continuous inflow of hazardous waste, is there a waste feed cut-off and/or bypass system to stop the flow should a leak or other emergency occur? Yes No
- 26.) Are all monitoring and/or gauge systems (ie. temp., pressure, etc.) inspected daily? Yes No
- 27.) Are all tanks inspected weekly for leaks and/or deterioration? Yes No
- 28.) Are NFPA buffer zone requirements for tanks containing ignitable and/or reactive wastes complied with? Yes No
- 29.) Are wastes contained in tanks:
- removed within 180 days - or -
  - removed within 270 days for generators over 200 miles from the designated TSD facility?
- Yes No

#### II Emergency Procedures :

- 30.) Is appropriate emergency equipment available at the facility (ie. phone, fire extinguisher, sprinklers, etc.)? (yes) No
- 31.) Have arrangements been made with local fire depts., police depts., rescue squads, hospitals, etc. to ensure they can respond to an emergency? (yes) No

- 32.) Is there adequate room at the facility to allow for movement of emergency equipment? (yes) No
- 33.) Does this facility have an emergency coordinator to ensure that all emergency procedures are carried out properly? (yes) No
- 34.) Are emergency phone numbers and the location of emergency equipment posted near the telephone? (yes) No
- 35.) Have all employees been instructed on proper emergency procedures to handle hazardous waste emergencies/incidents? (yes) No
- 36.) Has any quantity of hazardous waste been involved in a spill, release or fire? yes (No)
- ~~37.)~~ If so, were the appropriate response agencies notified: NA yes No
- National Response Center 1-800-424-8802
- State Response Center 1-800-642-3074
- Comment: \_\_\_\_\_

Inspector: James R. Fenske

Date Inspected: March 6, 1987

Office Location: Wheeling, WV

Agency/Division: WVDNR-DWM

Inspector:

Date Inspected:

Office Location:

Agency/Division:

(A)

RESOURCE CONSERVATION AND RECOVERY ACT  
CHECKLIST FOR USE AND MANAGMENT OF CONTAINERS

Subpart I, §265.170 "General Operating Requirements"  
as referenced by Section 8.1.6 for TSD facilities and 6.3.5.a.1 for generators of the  
West Virginia Administrative Regulations promulgated under Chapter 20, Article 5E  
of the West Virginia Code.

Attachment "D"

NAME OF FACILITY: TRIANGLE PWC Inc.  
ADDRESS: 1701 ~~W. Main~~ Wheeling Ave  
LOCATION: Glendale, WV 26038  
EPA GENERATOR I. D. #: WV D004314928  
FACILITY INSPECTION REPRESENTATIVE: MR. Charles McClarin  
TITLE: Technical Superintendent  
TELEPHONE NUMBER: 304/845-4020

NOTE: The questions contained in this checklist apply to owners and operators of  
all hazardous waste facilities that store containers of hazardous waste,  
except as Section 265.1 provides otherwise.

Pert. Regs.  
40 C.F.R. §265.

|                        |   |                                      |                                     |
|------------------------|---|--------------------------------------|-------------------------------------|
| 265.171                | 1. Are all containers in good condition, i.e., not showing signs of leakage or corrosion or any other deterioration/deformation?  | <input checked="" type="radio"/> YES | <input type="radio"/> NO            |
| 265.172                | 2. Are containers lined or made of materials compatible with hazardous wastes placed into them so that the container will not react or corrode with the hazardous wastes? | <input checked="" type="radio"/> YES | <input type="radio"/> NO            |
| 265.173(a)             | 3. Are all containers holding hazardous waste kept closed during storage?   | <input checked="" type="radio"/> YES | <input type="radio"/> NO            |
| 265.174                | 4. Are areas where hazardous waste containers are stored inspected by the owner/operator at least once a week?  | <input checked="" type="radio"/> YES | <input type="radio"/> NO            |
| 265.15(d)<br>265.15(b) | 5. Is an inspection log maintained?   | <input type="radio"/> YES            | <input checked="" type="radio"/> NO |

- |            |   |                                      |                                     |
|------------|---|--------------------------------------|-------------------------------------|
| 265.176    | 6. Are containers holding ignitable or reactive waste located at least 50 ft. from the facility's property line?  | <input checked="" type="radio"/> YES | <input type="radio"/> NO            |
| 265.177(a) | 7. Are incompatible wastes placed in the same container? (see Appendix 5 for examples)  | YES                                  | <input checked="" type="radio"/> NO |
| 265.177(c) | 8. Are storage containers holding hazardous wastes which are incompatible with nearby materials stored in containers, tanks, piles, or surface impoundments separated by dikes, berms, walls, or other devices? | NA<br>YES                            | NO                                  |

First Inspector

Second Inspector

INSPECTOR'S NAME: James R. Fenske

TITLE: Water Res. Insp

AGENCY: WVDNR - DWM

OFFICE LOCATION: Wheeling

INSPECTION DATE: March 6th, 1987

## MATERIAL SAFETY DATA SHEET

SAFETY-KLEEN CORP.

777 Big Timber Rd.

Elgin, IL 60120


 IDENTITY (As Used on Label and List)  
 Safety-Kleen 105 Solvent-MS

 Note: Blank spaces are not permitted. If any item is not applicable, or no  
 information is available, the space must be marked to indicate that.

## Section I

Part #6617

 Manufacturer's Name  
 Safety-Kleen Corp.

 Emergency Telephone Number  
 312/697-8460

 Address (Number, Street, City, State, and ZIP Code)  
 777 Big Timber Road

 Telephone Number for Information  
 312/697-8460

Elgin, Illinois 60120

 Date Prepared  
 11/6/85

Signature of Preparer (optional)

## Section II — Hazardous Ingredients/Identity Information

| Hazardous Components (Specific Chemical Identity; Common Name(s)) | OSHA PEL | ACGIH TLV | Other Limits Recommended | % (optional) |
|---|----------|-----------|--------------------------|--------------|
| Mineral Spirits   | 500 ppm  | 100 ppm   | -                        | 99.9+        |
| Dye   | Unk.     | Unk.      | -                        | 0.003        |
| Anti-Static Agent   | Unk.     | Unk.      | 100 est.                 | 1 ppm        |

## Section III — Physical/Chemical Characteristics

|                                |           |   |             |
|--------------------------------|-----------|---|-------------|
| Boiling Point                  | 310-400°F | Specific Gravity (H <sub>2</sub> O = 1) | 0.775-0.795 |
| Vapor Pressure (mm Hg.) @ 68°F | 2         | Melting Point                           | N/A         |
| Vapor Density (AIR = 1)        | 4.9       | Evaporation Rate (Toluene = 1)          | 0.2         |

Solubility in Water

Negligible.

Appearance and Odor

Clear green liquid with characteristic hydrocarbon odor.

## Section IV — Fire and Explosion Hazard Data

|                           |           |                  |         |         |
|---------------------------|-----------|------------------|---------|---------|
| Flash Point (Method Used) | 105°F TCC | Flammable Limits | LEL 0.7 | UEL 6.0 |
|---------------------------|-----------|------------------|---------|---------|

Extinguishing Media

CO<sub>2</sub>, foam, dry chemical, water (mist only)

Special Fire Fighting Procedures

None.

Unusual Fire and Explosion Hazards

None.

**Section V — Reactivity Data**

|           |          |   |                               |
|-----------|----------|---|-------------------------------|
| Stability | Unstable |   | Conditions to Avoid           |
|           | Stable   | X | Heat, sparks, flame and fire. |

Incompatibility (Materials to Avoid)

Strong oxidizing agents.

Hazardous Decomposition or Byproducts

Normally none; however, incomplete burning may yield carbon monoxide.

|                          |                |   |                     |
|--------------------------|----------------|---|---------------------|
| Hazardous Polymerization | May Occur      |   | Conditions to Avoid |
|                          | Will Not Occur | X |                     |

**Section VI — Health Hazard Data**

|                    |                    |             |                   |
|--------------------|--------------------|-------------|-------------------|
| Route(s) of Entry: | Inhalation?<br>yes | Skin?<br>no | Ingestion?<br>yes |
|--------------------|--------------------|-------------|-------------------|

Health Hazards (Acute and Chronic)

Skin - can cause drying of skin. Eyes - severe irritant. Inhalation - excessive inhalation can cause headache, dizziness and nausea. Ingestion - harmful or fatal if swallowed.

|                  |      |                  |                 |
|------------------|------|------------------|-----------------|
| Carcinogenicity: | NTP? | IARC Monographs? | OSHA Regulated? |
|------------------|------|------------------|-----------------|

Not a known or potential carcinogen.

Signs and Symptoms of Exposure

Drying of skin, eye irritation, headache, dizziness, nausea.

Medical Conditions

Generally Aggravated by Exposure Unknown.

Emergency and First Aid Procedures

Skin - Wash with soap and water. Eyes - Irrigate with water. Inhalation - Remove to fresh air source and call a physician. Ingestion - DO NOT induce vomiting. Call a physician.

**Section VII — Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material Is Released or Spilled

Catch and collect for recovery as soon as possible. Avoid exposure to sparks, fire, flame, hot surfaces.

Waste Disposal Method

Dispose of in accordance with company, local, state and federal regulations.

Precautions to Be Taken in Handling and Storing

Combustible. Keep away from heat, sparks, flame. Use with adequate ventilation. Avoid long and repeated contact with skin. If clothes are inadvertently saturated with solvent-

Other Precautions

DO NOT SMOKE- keep away from ignition sources. Keep out of reach of children.

**Section VIII — Control Measures**

Respiratory Protection (Specify Type)

Self-contained breathing apparatus for concentrations above TLV limits.

|             |   |                  |
|-------------|---|------------------|
| Ventilation | Local Exhaust<br>Normal room ventilation. | Special<br>None. |
|             | Mechanical (General)<br>None.             | Other<br>None.   |

Protective Gloves In cases of prolonged contact, wear rubber gloves.

Eye Protection

Yes - eyeglasses, safety glasses.

Other Protective Clothing or Equipment

N/A

Work/Hygenic Practices

Do not smoke while using this solvent.

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

United States Environmental Protection Agency  
Washington, DC 20460



**EPA Notification of Hazardous Waste Activity**

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (*Section 3010 of the Resource Conservation and Recovery Act*).

**For Official Use Only**

## Comments

[illegible]

### I. Name of Installation

[illegible]

## II. Installation Mailing Address

Street or P.O. Box

|              |   |                    |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |  |       |          |   |   |   |   |   |  |  |  |
|--------------|---|--------------------|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|--|-------|----------|---|---|---|---|---|--|--|--|
| C            |   | Street or P.O. Box |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |  |       |          |   |   |   |   |   |  |  |  |
| 3            | 1 | 7                  | 0 | 1 |   | W | H | E | E | L | I | N | G |  | A | V | E | . |  |       |          |   |   |   |   |   |  |  |  |
| City or Town |   |                    |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |  | State | ZIP Code |   |   |   |   |   |  |  |  |
| C            |   |                    |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |  |       |          |   |   |   |   |   |  |  |  |
| 4            | G | L                  | E | N | D | A | L | E |   |   |   |   |   |  |   |   |   |   |  |       |          |   |   |   |   |   |  |  |  |
|              |   |                    |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |  | W     | V        | 2 | 6 | 0 | 3 | 8 |  |  |  |

### III. Location of Installation

Street or Route Number

[illegible]

#### IV. Installation Contact

Name and Title (last, first, and job title)

Phone Number (area code and number) \_\_\_\_\_

[illegible]

### V. Ownership

A. Name of Installation's Legal Owner

B. Type of Ownership (enter code)

[illegible]

**VI. Type of Regulated Waste Activity** (Mark 'X' in the appropriate boxes. Refer to instructions.)

### A. Hazardous Waste Activity

### B. Used Oil Fuel Activities

|  |  |
|--|--|
| <input checked="" type="checkbox"/> 1a. Generator<br><input type="checkbox"/> 2. Transporter<br><input type="checkbox"/> 3. Treater/Storer/Disposer<br><input type="checkbox"/> 4. Underground Injection<br><input type="checkbox"/> 5. Market or Burn Hazardous Waste Fuel<br>(enter 'X' and mark appropriate boxes below)<br><input type="checkbox"/> a. Generator Marketing to Burner<br><input type="checkbox"/> b. Other Marketer<br><input type="checkbox"/> c. Burner | <input type="checkbox"/> 1b. Less than 1,000 kg/ mo.<br><br><input type="checkbox"/> 6. Off-Specification Used Oil Fuel<br>(enter 'X' and mark appropriate boxes below)<br><input type="checkbox"/> a. Generator Marketing to Burner<br><input type="checkbox"/> b. Other Marketer<br><input type="checkbox"/> c. Burner<br><br><input type="checkbox"/> 7. Specification Used Oil Fuel Marketer (or On site Burner)<br>Who First Claims the Oil Meets the Specification |
|--|--|

**VII. Waste Fuel Burning: Type of Combustion Device** (enter "X" in all appropriate boxes to indicate type of combustion device(s) in which hazardous waste fuel or off-specification used oil fuel is burned. See instructions for definitions of combustion devices.)

☐ A. Utility Boiler☐ **B. Industrial Boiler**☐ C. Industrial Furnace

**VIII. Mode of Transportation** *(transporters only — enter 'X' in the appropriate box(es))*

☐ A. Air    ☐ B. Rail    ☐ C. Highway    ☐ D. Water    ☐ E. Other (specify) \_\_\_\_\_

## IX. First or Subsequent Notification

Mark 'X' in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA ID Number in the space provided below.

**C. Installation's EPA ID Number**

☒ A. First Notification      ☐ B. Subsequent Notification (complete item C)

| ID — For Official Use Only |  |  |  |  |  |  |  |  |  |  |  |  |     |   |
|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|-----|---|
| C                          |  |  |  |  |  |  |  |  |  |  |  |  | T/A | C |
| W                          |  |  |  |  |  |  |  |  |  |  |  |  |     | 1 |

# X. Description of Hazardous Wastes (continued from front)

**A. Hazardous Wastes from Nonspecific Sources.** Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from nonspecific sources your installation handles. Use additional sheets if necessary.

|         |   |   |    |    |    |
|---------|---|---|----|----|----|
| 1       | 2 | 3 | 4  | 5  | 6  |
| F 0 0 2 |   |   |    |    |    |
| 7       | 8 | 9 | 10 | 11 | 12 |
|         |   |   |    |    |    |

**B. Hazardous Wastes from Specific Sources.** Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific sources your installation handles. Use additional sheets if necessary.

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 13 | 14 | 15 | 16 | 17 | 18 |
|    |    |    |    |    |    |
| 19 | 20 | 21 | 22 | 23 | 24 |
|    |    |    |    |    |    |
| 25 | 26 | 27 | 28 | 29 | 30 |
|    |    |    |    |    |    |

**C. Commercial Chemical Product Hazardous Wastes.** Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 31 | 32 | 33 | 34 | 35 | 36 |
|    |    |    |    |    |    |
| 37 | 38 | 39 | 40 | 41 | 42 |
|    |    |    |    |    |    |
| 43 | 44 | 45 | 46 | 47 | 48 |
|    |    |    |    |    |    |

**D. Listed Infectious Wastes.** Enter the four-digit number from 40 CFR Part 261.34 for each hazardous waste from hospitals, veterinary hospitals, or medical and research laboratories your installation handles. Use additional sheets if necessary.

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 49 | 50 | 51 | 52 | 53 | 54 |
|    |    |    |    |    |    |

**E. Characteristics of Nonlisted Hazardous Wastes.** Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles. (See 40 CFR Parts 261.21 — 261.24)

☐ 1. Ignitable  
(D001)

☐ 2. Corrosive  
(D002)

☐ 3. Reactive  
(D003)

☐ 4. Toxic  
(D000)

# XI. Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

|                                      |   |                        |
|--------------------------------------|---|------------------------|
| Signature<br><i>Charles McClarin</i> | Name and Official Title (type or print)<br>Charles McClarin, Tech. Supervisor | Date Signed<br>9/17/86 |
|--------------------------------------|---|------------------------|

Attachment "G"  
**Triangle PWC, Inc.**

NEW BRUNSWICK, NEW JERSEY 08903

—REPLY TO—  
December 12, 1980

STEEL CONDUIT DIVISION  
1701 WHEELING AVENUE  
GLEN DALE, W. VA. 26038  
TELEPHONE: 848-4020

Douglas Costle  
Office of Solid Waste  
United States Environmental Protection Agency  
401 M. Street South West  
Washington, D.C. 20460

The purpose of this petition is to obtain an amendment to the Resource Conservation and Recovery Act as permitted under Subpart C section 260.22, as pertains to the exclusion of a solid waste generated at a particular facility, namely, Triangle PWC, Inc. 1701 Wheeling Ave., Glen Dale, W.Va. 26038. It is Triangle PWC's intent to prove that the waste generated at the Glen Dale plant is not hazardous and as a result should not be listed as such. The present listing of the waste as hazardous has imposed a severe economic hardship on the Glen Dale Plant because the waste must now be disposed of in an approved hazardous waste landfill. Since there are no approved hazardous waste landfills in West Virginia, Triangle must dispose of the waste out of state, which has increased Triangle's disposal cost from \$8.25 per ton to \$25.00 per ton. The delisting of the waste in question would allow us to use a state approved Industrial Waste Landfill.

The solid waste in question is listed as "Sludge from Lime Treatment of Spent Pickle Liquor from Steel Finishing Operations" ( 261.32 Hazardous Waste No. K063). The delisting of this particular waste is addressed in the Federal Register Volume 45, No. 220, page 74888, dated November 12, 1980. A copy of that page is attached to this petition. A direct quote from that page of the Federal Register follows:

"The delisting provision ( 260.22) requires petitioners to consider a range of factors in showing why a waste does not meet the criteria for listing contained in 261.11 (a) (3). Since our chief concern with these lime treatment sludges is whether they will leach significant concentrations of lead and chromium we will consider delisting petitions for these wastes to be adequate if petitioners show that concentrations of lead and chromium in EP waste extracts are significantly less than the maximum concentration levels for lead and chromium contained in 261.24 without requiring consideration of the other delisting factors."

With this statement in mind Triangle PWC is prepared to show that Leachate Tests on five samples of sludge showed very low concentrations of lead and chromium in EP waste extracts. The results of the Leachate Tests on the five samples are attached.

In addition Triangle PWC would like to answer the 12 questions under 260.22 item (2) in the delisting procedure.

- (1) ERC/Lancy  
Division of Dart Environment and Services Co.  
525 West New Castle Street  
Zelienople, Penna. 16063
- (2) Testing and Sampling:  
John Ritzert  
Manager - Analytical Services  
ERC/Lancy  
Note: Attached document on the Laboratory performing the analysis and associated sampling.  
  
Sampling:  
Charles McClarin  
Technical Superintendent  
Triangle PWC, Inc.  
1701 Wheeling Ave  
Glen Dale, W.Va. 26038  
Master of Science Degree in Physical Chemistry  
Kent State University 1967
- (3) Dates of sampling and testing are listed on attached document from ERC/Lancy
- (4) Triangle PWC, Inc.  
1701 Wheeling Ave.  
Glen Dale, W.Va. 26038

(5) Two manufacturing processes are involved in the production of the sludge in question. Approximately 99% of the sludge is generated when dilute sulfuric acid pickle liquors are neutralized with lime. The sulfuric acid (12% by wt.) is used to pickle mild steel pipe used in the manufacture of Rigid Conduit. When the iron level in the acid reaches about 7% by wt., the acid is pumped to our waste treatment area and neutralized with lime. The exact procedure that is currently being used to treat waste pickle acid is attached to this petition (item M pages 25 & 26).

The remaining 1% of the sludge resulting from the lime treatment is attached to chromium wastes coming from our integrated chromium treatment system used on our zinc plater. The exact procedure used in our integrated chromium treatment system is also attached to this petition (item K, pages 21, 22 & 23).

Since the sulfuric acid is used only to pickle mild steel pipe, which contains minute quantities of chromium and lead, the waste resulting from this process would contain only minute quantities of chromium and lead.

Any chromium introduced into the acid from the integrated chromium

treatment system should also be in the trivalent form. However two backup treatments are used so that no hexavalent chromium can find its way into the lime treated sludge. The first backup is that any hexavalent chromium that would be pumped into the discarded pickle solution would be reduced by the ferrous iron in the pickle acid. The second backup is that each batch is checked for hexavalent chromium using a spot test (WCR-ST). A copy of the spot test procedure is attached. If any hexavalent chromium is detected in the spent pickle acid, the acid is treated with sodium bisulfite until all the chromium is reduced as determined by analysis.

(6) The waste produced from the lime treatment is a brown solid containing varying amounts of water. See Attached Photograph. The maximum amount produced per month is 1,500,000 pounds. The average amount produced per month is 1,050,000 pounds the maximum annual quantity of sludge produced would be 17,000,000 pounds. The average amount of sludge produced annually would be 11,550,000 pounds.

(7) Section 261.11 (a) (3) is the subject of the November 12 ruling which I quoted on page 2 of this petition.

(8) Five samples of sludge were collected in the following manner: The "North Sludge" sample was collected from a sludge pond that had been receiving all of our lime treated sludge from 6/5/80 to 10/6/80. A representative sample of the North Sludge pond was obtained by collecting samples from different sections and depths of the pond. These samples were collected in glass beakers, composited and dated. They were then placed into a plastic water tight container and shipped to Lancy Labs for analysis. This composited sample was labeled North Sludge.

The remaining four samples were collected over a four day period from 10/14/80 to 10/17/80. These samples were collected from our Duro Quadra Press filters (model # QP-1200/50-43). A specification sheet and a bulletin on the presses is attached to this petition. Representative samples were obtained by collecting samples of sludge from each press after the sludge had been dewatered and dropped into a 4yd<sup>3</sup> hopper. Samples were obtained in a glass beaker from different sections of each hopper. Each days samples were composited and dated. The composited samples were representative of 560 ft<sup>3</sup> of sludge that was processed each day. The composited samples were shipped to ERC/Lancy in plastic water tight containers.

(9) After the five samples were collected according to the procedure outlined in item (8), all future handling was in accordance with procedures published in 40CFR 136 on with modified procedures approved by EPA per page 5 of the ERC/Lancy report.

(10) EP toxicity tests were run on the five samples of sludge submitted according to 40CFR 261.24 Appendix II. This is also per page 5 of the ERC/Lancy Lab report.

(11) The following instruments were used in performing the tests.

- a. Atomic Absorption Spectrophotometer Instrumentation  
Labs Model 257
- b. Graphite Furnace Model 555 GTF
- c. Corning PH Meter Model 12

(4)

(12) I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

*Charles McClarin*

Charles McClarin  
Technical Superintendent  
Triangle PWC, Inc.  
1701 Wheeling Avenue  
Glen Dale, West Virginia  
26038

# ERC/LANCY

November, 1980

Triangle PWC, Inc.

New Brunswick, New Jersey 08903

Page -2-

North Sludge      Dated 10/20/80      Received 10/23/80

| <u>Parameter</u> | <u>Sludge (mg/Kg)</u> | <u>EP Toxicity (mg/L)</u> |
|------------------|-----------------------|---------------------------|
| pH (SU)          | ---                   | 4.8                       |
| Arsenic          | 0.53                  | <0.01                     |
| Barium           | 89.7                  | 1.9                       |
| Cadmium          | <5.0                  | 0.02                      |
| Chromium         | 31.7                  | <0.01                     |
| Copper           | 26.4                  | 0.21                      |
| Iron             | 27900                 | 387.0                     |
| Lead             | 13.7                  | 0.02                      |
| Mercury          | 0.0060                | <0.0005                   |
| Nickel           | 10.6                  | 0.43                      |
| Selenium         | <5.0                  | <0.01                     |
| Silver           | <5.0                  | <0.01                     |
| Zinc             | 4400                  | 368.0                     |
| Solids           | 30.5 %                | 5596                      |

# ERC/LANCY

November, 1980

Triangle PWC, Inc.  
New Brunswick, New Jersey 08903  
Page -3-

10/14 Sludge Received 10/23/80

| <u>Parameter</u> | <u>Sludge (mg/Kg)</u> | <u>EP Toxicity (mg/L)</u> |
|------------------|-----------------------|---------------------------|
| pH (SU)          | ---                   | 5.0                       |
| Arsenic          | 0.50                  | <0.01                     |
| Barium           | 209.0                 | 1.1                       |
| Cadmium          | 5.0                   | 0.03                      |
| Chromium         | 94.7                  | 0.02                      |
| Copper           | 44.9                  | 0.02                      |
| Iron             | 44900                 | 8.8                       |
| Lead             | 34.9                  | 0.02                      |
| Mercury          | 0.0051                | <0.0005                   |
| Nickel           | 15.0                  | 0.35                      |
| Selenium         | <5.0                  | <0.01                     |
| Silver           | <5.0                  | <0.01                     |
| Zinc             | 12900                 | 24.8                      |
| Solids           | 35.6 %                | 4408                      |

10/15 Sludge

| <u>Parameter</u> | <u>Sludge (mg/Kg)</u> | <u>EP Toxicity (mg/L)</u> |
|------------------|-----------------------|---------------------------|
| pH (SU)          | ---                   | 5.1                       |
| Arsenic          | 1.07                  | <0.01                     |
| Barium           | 160.0                 | 1.9                       |
| Cadmium          | <5.0                  | 0.13                      |
| Chromium         | 150.0                 | 0.02                      |
| Copper           | 53.5                  | 0.09                      |
| Iron             | 36400                 | <0.01                     |
| Lead             | 33.1                  | 0.02                      |
| Mercury          | 0.0099                | <0.0005                   |
| Nickel           | 16.0                  | 0.31                      |
| Selenium         | <5.0                  | <0.01                     |
| Silver           | <5.0                  | 0.01                      |
| Zinc             | 23400                 | 283.0                     |
| Solids           | 45.4 %                | 5102                      |

# ERC/LANCY

November, 1980

Triangle PWC, Inc.  
New Brunswick, New Jersey 08903  
Page -4-

10/16 Sludge                      Received    10/23/80

| <u>Parameter</u> | <u>Sludge (mg/Kg)</u> | <u>EP Toxicity (mg/L)</u> |
|------------------|-----------------------|---------------------------|
| pH (SU)          | ---                   | 4.85                      |
| Arsenic          | <0.5                  | <0.01                     |
| Barium           | 152.0                 | 1.6                       |
| Cadmium          | <5.0                  | 0.02                      |
| Chromium         | 117.0                 | 0.04                      |
| Copper           | 44.1                  | 0.01                      |
| Iron             | 37200                 | 22.9                      |
| Lead             | 31.3                  | 0.02                      |
| Mercury          | 0.0112                | <0.0005                   |
| Nickel           | 14.7                  | 0.36                      |
| Selenium         | <0.5                  | <0.01                     |
| Silver           | <5.0                  | 0.01                      |
| Zinc             | 10300                 | 182.0                     |
| Solids           | 36.2 %                | 3900                      |

10/17 Sludge

| <u>Parameter</u> | <u>Sludge (mg/Kg)</u> | <u>EP Toxicity (mg/L)</u> |
|------------------|-----------------------|---------------------------|
| pH (SU)          | ---                   | 5.15                      |
| Arsenic          | 1.19                  | <0.01                     |
| Barium           | 233.0                 | 2.5                       |
| Cadmium          | <5.0                  | 0.09                      |
| Chromium         | 167.0                 | 0.04                      |
| Copper           | 35.9                  | 0.04                      |
| Iron             | 56800                 | <0.01                     |
| Lead             | 41.8                  | 0.03                      |
| Mercury          | 0.0099                | <0.0005                   |
| Nickel           | 23.9                  | 0.29                      |
| Selenium         | <0.5                  | <0.01                     |
| Silver           | 71.7                  | 0.02                      |
| Zinc             | 15800                 | 310.0                     |
| Solids           | 53.6 %                | 5164                      |

# ERC/LANCY

November, 1980

Triangle PWC, Inc.,  
New Brunswick, New Jersey 08903  
Attn: Mr. Paul Sidhu

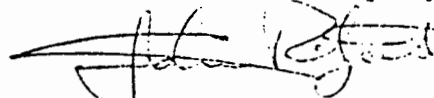
Page -5-

Test procedures used were those approved by the United States Environmental Protection Agency as published in 40 CFR 136 or with modified procedures approved by EPA.

The EP Toxicity test was performed according to 40 CFR 261.24, Appendix II.

ERC/Lancy

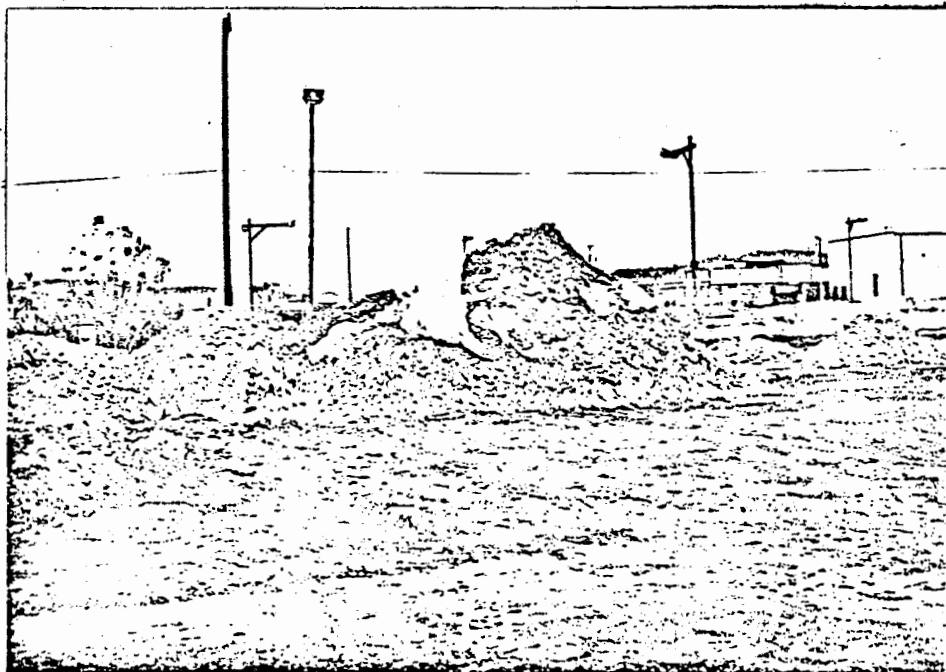
Division of Dart Environment  
and Services Company



C. John Ritzert  
Manager-Analytical Services

cc: W. Fred Stevens, ERC/Lancy  
John Russo, Triangle PWC, Inc.  
(Glendale, W.VA)

CJR:pab



# Lancy LABORATORIES

Triangle Conduit & Cable Co.

Glen Dale, W. Va.

## M. WASTE PICKLE ACID TREATMENT

Location: Batch Treatment Area

### INTRODUCTION

In general, metal hydroxide precipitates which are formed in dilute solution are far more hydrated and voluminous than those formed in treating a concentrated solution of the metal. These dilute sludges are also much more difficult to thicken and de-water. For this reason, a separate collection tank, Waste Acid Storage Tank, TA-7, and treatment tank(TA-5 and TA-6) are provided for the discarded concentrated acid solutions.

### OPERATION

All spent acid pickle solution and chromate solutions will be transferred to the waste acid storage tank; a special piping connection system with a portable pump has been provided to accomplish this. The waste acid storage tank is equipped with a level gage and high-level alarm to warn the operator when it is full. Dumping of the solution in plant will have to be done on a schedule so that they are staggered and no solution should be pumped out until the operator has been consulted regarding space for the solution. It is estimated that three or four batches will have to be treated in the batch neutralization tanks each day.

In order to produce a dense, filterable sludge, the waste acid solutions must be neutralized hot. For this reason, the waste acid storage tank is insulated and equipped with a steam coil and temperature controller.. The controller should be set so as to maintain about  $150^{\circ} - 160^{\circ}$  F. Since the pickle solution is dumped hot and the tank is well insulated, very little steam will be needed to maintain this temperature. Once neutralization is started, the heat generated by the chemical reactions will maintain the temperature in the batch neutralization tanks. Since the turbine agitator in the batch neutralization tanks are made of stainless steel, it should not be left immersed in waste acid for long periods of time. Therefore, acid should be transferred to the batch neutralization tanks only when it is to be neutralized within two hours. Since the acid must be kept hot, this would be normal procedure in any event.

### Acid Batches

The ferrous iron in the discarded pickle solution should always be in excess and thus keep all hexavalent chromium in the acid collection tank reduced. However, provision has been made to reduce the chromium in the batch neutralization tanks if the iron would be insufficient. For this reason, each

# Lancy LABORATORIES

Triangle Conduit & Cable Co.

Glen Dale, W. Va.

## Integrated Chromium Treatment System (continued)

Check for the hydrazine concentration twice daily by the use of Test Procedure WNH-ST. The pH should be checked by using Narrow Range pH papers or a laboratory pH meter at least once per day.

After several weeks of operation, an additional aid to the proper control of the treatment solution will be its color which should be a bluish-white without any yellow coloration.

Once per week the pH electrode should be removed from the reservoir tank, cleaned, and immersed in standard buffer solutions as a check on the electrode system and the pH control instrument. At this time any required calibration adjustments may be made to the instrument according to the manufacturer's instructions.

### (a) Effluent Rinse Water

Check for hexavalent chromium in the effluent from the rinse tank immediately following the treatment wash tank once each day using the spot test described in test Procedure WCR-ST, appended.

### 3. Dumping

To control the accumulation of dissolved salts in the treatment solution and to accomplish the removal of sludges from the reservoir tank, sludgy treatment solution should be drawn from the bottom of the reservoir tank once per week and pumped to the sludge holding and decant tank. A guide to the amount which should be dumped is that about 40-50 gallons of treatment solution should be removed for each gallon of 85% hydrazine hydrate which is added. After drawing off the desired amount of sludge, the reservoir should be refilled with water and replenished with an appropriate addition of stock solution from the chemical mixing tank.

# Lancy LABORATORIES

## TEST PROCEDURE SERIES

TEST: CHROMIC ACID SPOT TEST

TEST PROCEDURE WCR-ST

### SPECIFICATIONS:

|                                  |   |
|----------------------------------|---|
| Type . . . . .                   | Qualitative                                   |
| Limit of Identification. . . . . | 0.25 ppm Cr <sup>6+</sup> as CrO <sub>3</sub> |
| Color. . . . .                   | Pink-Violet                                   |

### REAGENTS:

1. 1% Diphenylcarbazide Indicator (Dissolve contents (0.25 g.) of one ampoule of Diphenylcarbazide in 25 ml C.P. Acetone).
2. Acetic Acid Buffer: 6 g. Sodium Acetate, 30 ml Glacial Acetic Acid and 75 ml water.

### PROCEDURE:

1. Place two drops of sample and two drops of distilled water to serve as a blank in cavities of a clean white spot plate.
2. To each cavity, add one drop of diphenylcarbazide indicator and stir with a clean stirring rod. The sample spot will turn orange-red if the solution being tested is alkaline. The blank spot will be colorless or slightly yellow.
3. To each cavity, add one drop of acetic acid buffer solution and again stir with the stirring rod. After one minute, the sample spot will become faint pink to violet if hexavalent chromium is present, while the blank spot will remain unchanged. If less than 0.25 ppm hexavalent chromium are present, the sample spot will be colorless or slightly yellow.



THE DURIRON COMPANY, INC.

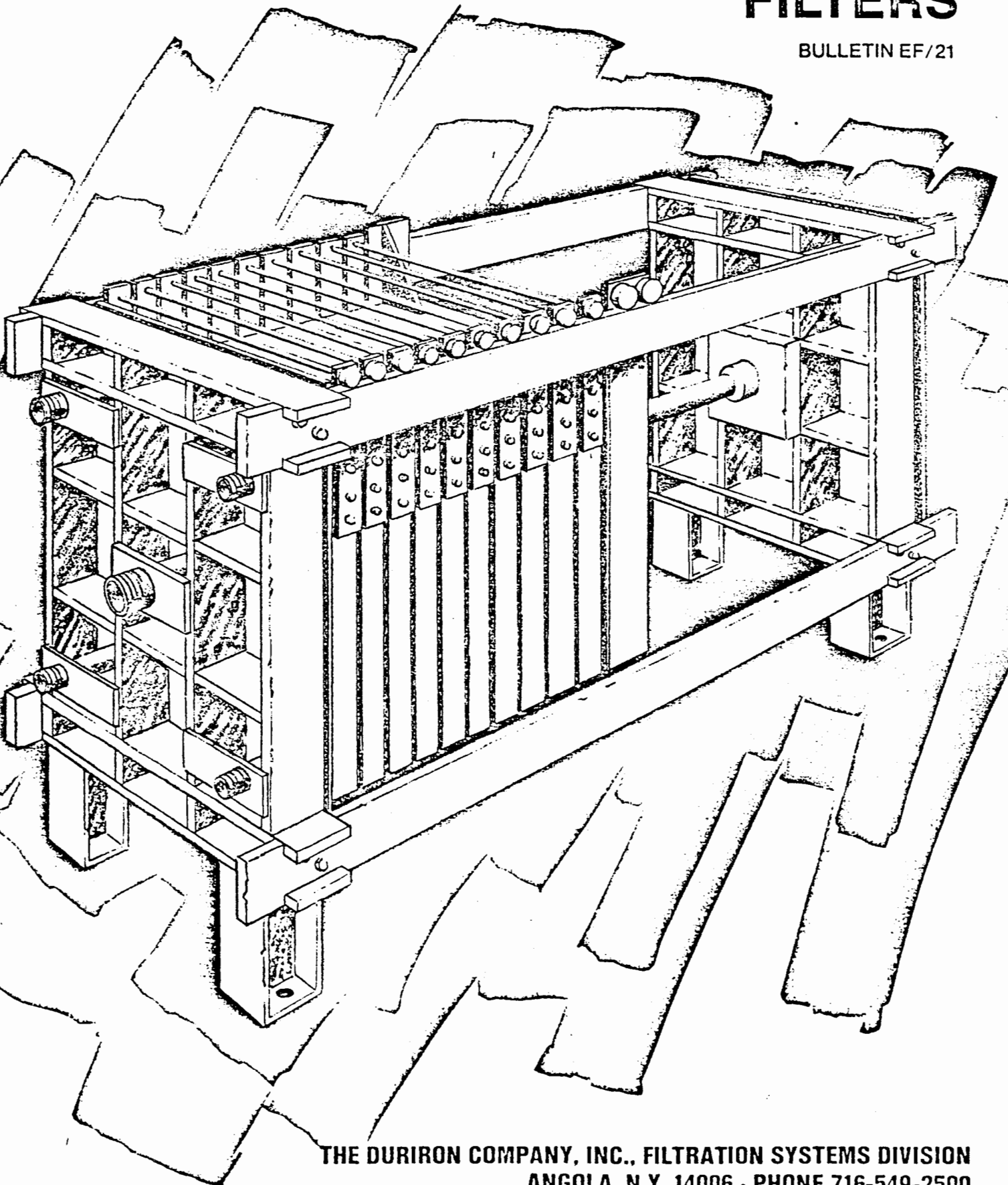
# QUADRA PRESS<sup>®</sup> FILTER MANUAL

## FILTER SPECIFICATION SHEET

|   |                               |
|---|-------------------------------|
| SHOP ORDER NUMBER                                       | E-25741                       |
| MODEL   | QP-1200/50-43                 |
| ASSEMBLY DRAWING and<br>FILTER PRESS OVERALL DIMENSIONS | J-27983-A2                    |
| NET FILTER VOLUME                                       | 80 cubic feet                 |
| NET FILTER AREA   | 1081 square feet              |
| NUMBER OF CHAMBERS                                      | 43                            |
| NUMBER OF PLATES  | 45                            |
| PLATE MATERIAL  | RAL 7032 Polypropylene        |
| CAKE THICKNESS  | 50mm                          |
| MAX. RECOMMENDED PRESSURE                               | 100 psig                      |
| MAX. RECOMMENDED TEMPERATURE                            | 90°C.                         |
| GASKET MATERIAL "O" RINGS                               | EPDM                          |
| GASKET MATERIAL PLATES                                  | None                          |
| CONNECTIONS   | NPT                           |
| TYPE FILTER ELEMENTS                                    | Recessed Champerplates        |
| RECOMMENDED MAX. HYD. PRESSURE                          | 4000 psig                     |
| PNEUMATIC BOOSTER PUMP RATIO                            | 100:1 Hyd. to Air             |
| ELECTRIC HYDRAULIC PUMP MOTOR                           | 230/460V, 3 Ph., 60 Cy., 2 HP |
| PNEUMATIC BOOSTER PUMP MODEL                            | PW-B100-C                     |
| CONTROL PANEL   | NEMA 4                        |
| PLATE TRANSPORT   | Semi-Auto                     |
| CLOSURE RAM   | Sheffer                       |

# DURCO QUADRA PRESS FILTERS

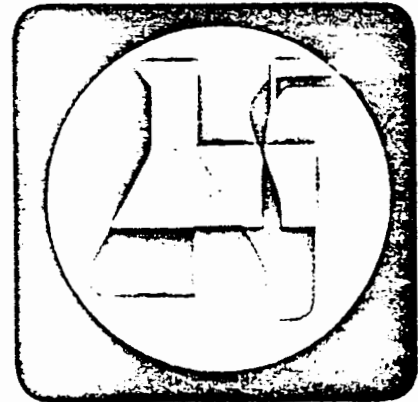
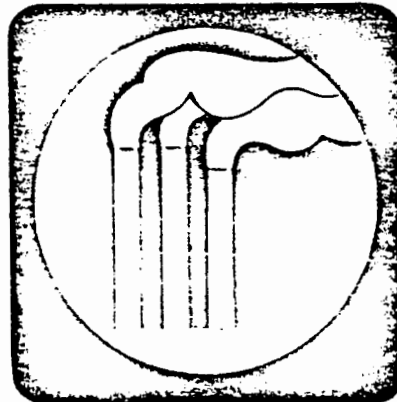
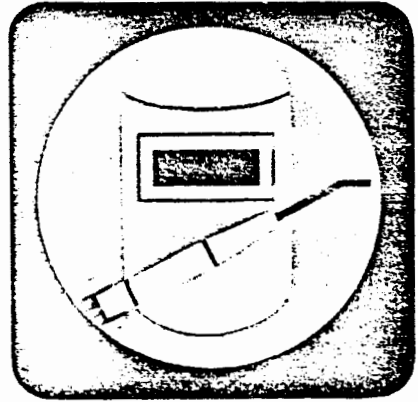
BULLETIN EF/21



THE DURIRON COMPANY, INC., FILTRATION SYSTEMS DIVISION  
ANGOLA, N.Y. 14006 • PHONE 716-549-2500

QUALITY CONTROL  
DOCUMENT

# ERC/LANCY



ENVIRONMENTAL SYSTEMS & SERVICES

Attachment "H"

92143

Uniform State  
HAZARDOUS WASTE MANIFEST

Work Order No. ATTN: BOB PAINTER

PART A:

Waste Manifest No. SS 9219-001

| NAME   | SITE ADDRESS   | PHONE NO.           | EPA I.D. NO.                 |
|--|--|---------------------|------------------------------|
| GENERATOR<br><b>TRIANGLE PWC</b>   | <b>1701 WHEGLING AVENUE<br/>GLENDALE WEST VIRGINIA 26038</b> | <b>304-845-4020</b> | <b>SMALL QUANTITY EXEMPT</b> |
| TRANSPORTER NO. 1<br><b>General Multiplex</b>                              | <b>P.O. BOX 8706<br/>CANTON OHIO 44711</b>                   | <b>216-493-9393</b> | <b>014D051813181015218</b>   |
| TRANSPORTER NO. 2 (IF ANY)   |  |                     |                              |
| TREATMENT STORAGE OR DISPOSAL FACILITY<br><b>CECOS INTERNATIONAL, INC.</b> | <b>5092 ABER RD<br/>WILLIAMSBURG OHIO 45176</b>              | <b>513-724-6114</b> | <b>014D0181741313171414</b>  |

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO. \_\_\_\_\_ OUT OF A TOTAL OF \_\_\_\_\_ THE FIRST MANIFEST DOCUMENT NO IS

| GENERATOR<br>PROPER U.S. DOT SHIPPING NAME | CECOS PROD. CODE | U.S. DOT HAZARD CLASS | UN NUMBER   | FORM     |        |     |        | QUANTITY | UNITS   |          |        |      | CONTAINERS NO. | EPA HAZ. CODE             | EPA WASTE TYPE |
|--|------------------|-----------------------|-------------|----------|--------|-----|--------|----------|---------|----------|--------|------|----------------|---------------------------|----------------|
|  |                  |                       |             | SOLID    | LIQUID | GAS | SLUDGE |          | GALLONS | CU. YDS. | POUNDS | TONS |                |                           |                |
| 1 <b>HAZARDOUS WASTE<br/>Solid Nos</b>     | <b>A</b>         | <b>ORM-E</b>          | <b>9189</b> | <b>X</b> |        |     |        | <b>7</b> |         |          |        |      | <b>1</b>       | <b>BULK<br/>VAC-TRUCK</b> | <b>N/A</b>     |
| 2  |                  |                       |             |          |        |     |        |          |         |          |        |      |                |                           |                |
| 3  |                  |                       |             |          |        |     |        |          |         |          |        |      |                |                           |                |
| 4  |                  |                       |             |          |        |     |        |          |         |          |        |      |                |                           |                |
| 5  |                  |                       |             |          |        |     |        |          |         |          |        |      |                |                           |                |
| 6  |                  |                       |             |          |        |     |        |          |         |          |        |      |                |                           |                |

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

**CYANIDE 66 PPM**

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA, and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

|  |                             |   |   |   |
|--|-----------------------------|---|---|---|
| GENERATOR'S SIGNATURE<br><b>* Charles McClarin</b> | TITLE<br><b>Tech. Supt.</b> | DATE SHIPPED<br><b>11/11/83</b>             | EXPECTED ARRIVAL DATE<br><b>11/14/83</b>  | TRAILER LICENSE NUMBER<br><b>18K352</b>                       |
| TRANSPORTER VEHICLE I.D. NO.<br><b>11</b>          | STATE<br><b>OH</b>          | N.Y.S. WASTE HAULER PERMIT NO.<br><b>11</b> | TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT<br><b>* Richard Anderson</b> | DATE RECEIVED<br><b>11</b> Month <b>15</b> Day <b>83</b> Year |

PART B:

|   |  |
|---|--|
| TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT<br><b>* Richard Anderson</b>                                  | DATE DELIVERED<br><b>11</b> Month <b>15</b> Day <b>83</b> Year |
| TRANSPORTER NO. 2 VEHICLE I.D. NO.<br><b>11</b>   | STATE<br><b>OH</b>   |
| NUMBER<br><b>11</b>   | DATE RECEIVED<br><b>11</b> Month <b>15</b> Day <b>83</b> Year  |
| TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   | DATE DELIVERED<br><b>11</b> Month <b>15</b> Day <b>83</b> Year |
| TREATMENT STORAGE OR DISPOSAL FACILITY OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS | HANDLING METHOD<br><b>1 081</b>                                |
| TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE AND CERTIFICATION<br><b>Tom Fleming</b>  | TITLE<br><b>Q.C. Tech</b>                                      |
| DATE RECEIVED<br><b>11</b> Month <b>15</b> Day <b>83</b> Year   |  |

**Uniform State  
HAZARDOUS WASTE MANIFEST**

92143  
Work Order No. AS-20-11-1001

**PART A:**

Waste Manifest No. SS 92 H-001

| NAME   | SITE ADDRESS   | PHONE NO.    | EPA I.D. NO.        |
|--|--|--------------|---------------------|
| GENERATOR<br><b>TRIANGLE PWC</b>   | 1701 Wheeling Avenue<br>Glenview West Virginia 26032 | 304-840-4030 | MAH 0000000000      |
| TRANSPORTER NO. 1<br><b>GENERAL Multi-plex</b>                             | P.O. Box 8706<br>Canton Ohio 44711                   | 216-492-9393 | OH 19051818151919   |
| TRANSPORTER NO. 2 (IF ANY)   |  |              |                     |
| TREATMENT STORAGE OR DISPOSAL FACILITY<br><b>CECOS INTERNATIONAL, INC.</b> | 5092 FB62 RD<br>Wilmington Ohio 45398                | 513-714-6114 | OH 1901917141917191 |

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE  
THIS FORM IS NO. \_\_\_\_\_ OUT OF A TOTAL OF \_\_\_\_\_ THE FIRST MANIFEST DOCUMENT NO IS \_\_\_\_\_

| PROPER U.S. DOT SHIPPING NAME     | CECOS PROD. CODE | U.S. DOT HAZARD CLASS | UN NUMBER | FORM  |        |     |        | QUANTITY | UNITS   |          |        |      | CONTAINERS NO. TYPE | EPA HAZ. CODE     | EPA WASTE TYPE |  |
|-----------------------------------|------------------|-----------------------|-----------|-------|--------|-----|--------|----------|---------|----------|--------|------|---------------------|-------------------|----------------|--|
|                                   |                  |                       |           | SOLID | LIQUID | GAS | SLUDGE |          | GALLONS | CU. YDS. | POUNDS | TONS |                     |                   |                |  |
| 1 HAZARDOUS WASTE<br>Solid Wastes | A                | 600-E                 | 9189      | X     |        |     |        | 7        |         |          |        |      | 1                   | 301K<br>VAC-TRUCK | N/A            |  |
| 2                                 |                  |                       |           |       |        |     |        |          |         |          |        |      |                     |                   |                |  |
| 3                                 |                  |                       |           |       |        |     |        |          |         |          |        |      |                     |                   |                |  |
| 4                                 |                  |                       |           |       |        |     |        |          |         |          |        |      |                     |                   |                |  |
| 5                                 |                  |                       |           |       |        |     |        |          |         |          |        |      |                     |                   |                |  |
| 6                                 |                  |                       |           |       |        |     |        |          |         |          |        |      |                     |                   |                |  |

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

CYANIDE 66 PPM

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA, and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

|   |                                |  |  |  |
|---|--------------------------------|--|--|--|
| GENERATOR'S SIGNATURE<br><i>* Charles McQuinn</i> | TITLE<br><i>Sec. Int.</i>      | DATE SHIPPED<br><i>11/1/83</i>                                       | EXPECTED ARRIVAL DATE<br><i>11/14/83</i> | TRAILER LICENSE NUMBER<br><i>18K352</i>            |
| TRANSPORTER VEHICLE I.D. NO.<br>STATE             | N.Y.S. WASTE HAULER PERMIT NO. | TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT |  | DATE RECEIVED<br>Month Day Year<br><i>11 11 83</i> |

**PART B:**

|   |                                     |
|---|-------------------------------------|
| TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   | DATE DELIVERED<br>Month Day Year    |
| TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT  | DATE RECEIVED<br>Month Day Year     |
| TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   | DATE DELIVERED<br>Month Day Year    |
| TREATMENT STORAGE OR DISPOSAL FACILITY OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS | HANDLING METHOD<br>1<br>2<br>3<br>4 |
| TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE AND CERTIFICATION  | DATE RECEIVED<br>Month Day Year     |

**Uniform State  
HAZARDOUS WASTE MANIFEST**

Work Order No. \* 92356

PART A:

Waste Manifest No. 56 7217-002

| NAME  | SITE ADDRESS  | PHONE NO.           | EPA I.D. NO.                  |
|---|---|---------------------|-------------------------------|
| GENERATOR<br><b>TRIANGLE PWC</b>  | <b>1701 WHEELING AVE<br/>GLENDALE WEST VIRGINIA</b> | <b>304-845-4020</b> | <b>Small Quantity, Exempt</b> |
| TRANSPORTER NO. 1<br><b>TONAWANDA TANK</b>                                    | <b>1140 MILITARY RD<br/>BUFFALO NEW YORK</b>        | <b>513-724-6114</b> | <b>NY D1018101321612141</b>   |
| TRANSPORTER NO. 2 (IF ANY)  |   |                     |                               |
| TREATMENT STORAGE OR<br>DISPOSAL FACILITY<br><b>CECOS INTERNATIONAL, INC.</b> | <b>5092 ABER RD<br/>WILLIAMSBURG GA 30696</b>       | <b>513-724-6114</b> | <b>OH D1018171413171414</b>   |

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE  
THIS FORM IS NO. \_\_\_\_\_ OUT OF A TOTAL OF \_\_\_\_\_ THE FIRST MANIFEST DOCUMENT NO IS \_\_\_\_\_

| PROPER U.S. DOT<br>SHIPPING NAME       | CECOS<br>PROD.<br>CODE | U.S. DOT<br>HAZARD CLASS | UN<br>NUMBER | FORM                                |        |     |        | QUANTITY  | UNITS   |                                     |        |      | CONTAINERS<br>NO. TYPE | EPA<br>HAZ.<br>CODE | EPA<br>WASTE TYPE |
|--|------------------------|--------------------------|--------------|-------------------------------------|--------|-----|--------|-----------|---------|-------------------------------------|--------|------|------------------------|---------------------|-------------------|
|  |                        |                          |              | SOLID                               | LIQUID | GAS | SLUDGE |           | GALLONS | CU YDS                              | POUNDS | TONS |                        |                     |                   |
| 1 <b>HAZARDOUS WASTE<br/>SOLID NOS</b> | <b>A1</b>              | <b>ORM-C</b>             | <b>9189</b>  | <input checked="" type="checkbox"/> |        |     |        | <b>20</b> |         | <input checked="" type="checkbox"/> |        |      | <b>1 Bulk</b>          | <b>N/A</b>          |                   |
| 2                                      |                        |                          |              |                                     |        |     |        |           |         |                                     |        |      |                        |                     |                   |
| 3                                      |                        |                          |              |                                     |        |     |        |           |         |                                     |        |      |                        |                     |                   |
| 4                                      |                        |                          |              |                                     |        |     |        |           |         |                                     |        |      |                        |                     |                   |
| 5                                      |                        |                          |              |                                     |        |     |        |           |         |                                     |        |      |                        |                     |                   |
| 6                                      |                        |                          |              |                                     |        |     |        |           |         |                                     |        |      |                        |                     |                   |

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

CYANIDE 66 PPM

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA, and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

|   |                    |   |  |  |
|---|--------------------|---|--|--|
| GENERATOR'S SIGNATURE<br><b>*Chuck McCloud BAA</b>      | TITLE              | DATE SHIPPED<br><b>11/30/83</b>   | EXPECTED ARRIVAL DATE<br><b>11/30/83</b> | TRAILER LICENSE NUMBER<br><b>S78039 NY</b>         |
| TRANSPORTER<br>VEHICLE<br>I.D. NO. <b>NY D020336141</b> | STATE<br><b>NY</b> | TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF<br>RECEIPT OF SHIPMENT<br><b>* [Signature]</b> |  | DATE RECEIVED<br><b>11 30 83</b><br>Month Day Year |

PART B:

|   |                    |  |
|---|--------------------|--|
| TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   |                    | DATE DELIVERED<br><b>12 1 83</b><br>Month Day Year |
| TRANSPORTER<br>NO. 2 VEHICLE<br>I.D. NO. <b>NY D020336141</b>   | STATE<br><b>NY</b> | NUMBER   |
| TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   |                    | DATE RECEIVED<br>Month Day Year                    |
| TREATMENT STORAGE OR DISPOSAL FACILITY OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS |                    | DATE DELIVERED<br>Month Day Year                   |
|   |                    | HANDLING METHOD                                    |
|   |                    | 1  |
|   |                    | 2  |
|   |                    | 3  |
| TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE AND CERTIFICATION<br><b>Wm W. G. [Signature]</b>   |                    | DATE RECEIVED<br><b>12 1 83</b><br>Month Day Year  |

# Lancy LABORATORIES

Triangle Conduit & Cable Co.

Glen Dale, W. Va.

## Acid Batches (continued)

time the batch neutralization tanks are filled, it should be checked for chromium before neutralization is started.

Dry hydrated lime will be used for neutralization of the acid content of the waste, and it will be metered at a steady rate by a rotary air-lock feeder. The progress of the reaction is followed by an indicating pH controller and double checked with pH paper. During the first several months of operation, the lime should be added in small increments (5-10 minutes of feed at a time) and at least 5 minutes of mixing time should be allowed between the addition of each increment. After experience has indicated the approximate amount of lime required for each batch, the additions can be made continuously until nearly the entire required amount has been fed.

The turbine agitator should be started before any lime additions are made and it should be kept running throughout the neutralization procedure and during the pump-out of the neutralization tank. It should be turned off just before the solution level falls to the turbine blades as the tank is emptied.

The entire neutral batch will be pumped out to the outside settling ponds for de-watering and thickening.

### (a) Non Chromate-Containing Batches

If analysis indicates the absence of hexavalent chromium, lime is added to increase the pH to 7.5-9.0. The neutralized contents of the tanks are then pumped to the outside sludge bed.

### (b) Chromate-Containing Batches

If analysis indicates the presence of hexavalent chromium in the acid collection tank, sodium bisulfite solution is added from the mixing tank until all chromium is reduced as determined by analysis. At this point, the pH is increased to a range of 7.5-9.0 by the addition of lime. (Test Procedure WCR-ST).

Discarded process solution from the continuous strip line, such as acid dip and chromium solution will also be transferred to the waste acid storage tank.

# Lancy LABORATORIES

Triangle Conduit & Cable Co.

Glen Dale, W. Va.

## K. INTEGRATED CHROMIUM TREATMENT SYSTEM

Location: EMT Treatment System, Col. #5 to 7

### INTRODUCTION

The Integrated Chromium Treatment System utilized hydrazine and soda ash for the complete reduction of hexavalent chromium and precipitation of the trivalent chromium hydroxide. The reactions proceed in two stages with the chromium being reduced to the trivalent state by hydrazine and the trivalent chromium ions being precipitated as the hydroxide and carbonate through the addition of sodium carbonate to maintain an alkaline condition.

### FUNCTIONAL DESCRIPTION

The chromium treatment system consists of treatment wash tanks in the EMT process line and a treatment reservoir, chemical feed pump, chemical mixing tank, and circulation pumps all external to but integrated with the metal finishing process.

The arrangement of the equipment is such as to provide the addition of treatment chemicals to the treatment solution; and to provide recirculation of the solution from the reservoir to the treatment wash tank and back to the reservoir.

The treatment solution reservoir is sized to serve two important functions. The first function is to serve as the all-important buffering component in the system to neutralize the shock loading caused by sudden and irregular changes in the quantity of chromate solution drag-out treated. The second function is to serve as a clarifier, settling out the insoluble chromium hydroxides and carbonates formed in the reaction.

To provide satisfactory treatment, the treatment solution must be maintained at a pH of 7.0-8.5 with an excess of hydrazine at a concentration of 500-700 ppm.

In operation, the clear supernatant from the chromium treatment solution reservoir is transferred to the treatment wash tank where it is distributed in excessive quantities over the surface of the work pieces. Upon contact, all hexavalent chromium in the drag-out is reduced to the trivalent form by the hydrazine. The trivalent chromium then reacts with the available alkalinity, producing trivalent chromium hydroxide and carbonate, and the products of this stage of the reaction are washed from the surface of the work pieces by the excess treatment solution.

# Lancy LABORATORIES

Triangle Conduit & Cable Co.

Glen Dale, W. Va.

## Integrated Chromium Treatment System (continued)

Thus, the work pieces leave the treatment wash tanks wetted only with harmless treatment solution which is removed in subsequent rinse tanks and discharged with other non-toxic rinse waters.

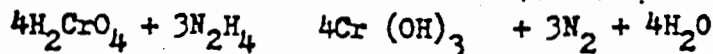
The partially-spent chromium treatment solution is returned from the treatment wash tanks to the treatment solution reservoir where the insoluble trivalent chromium hydroxide and the carbonate settle out.

Prior to return to the treatment wash tank, the alkalinity and the hydrazine of the treatment solution are replenished by the addition of soda ash (sodium carbonate) and hydrazine.

A chemical mixing tank is provided for daily make-up of a solution containing soda ash and hydrazine. Addition of this chemical solution is controlled by an automatic pH controller which operates the chemical feed pump.

## CHEMISTRY OF THE SYSTEM

The reduction of Hexavalent chromium to trivalent chromium through the use of hydrazine can be represented with the following chemical equation:



## OPERATION

### 1. Chemical Feed Rates:

Tentatively, it is proposed that a solution of soda ash and hydrazine be prepared with a mixture of 25 lb./50 gal. soda ash, and  $4\frac{1}{2}$  pints/50 gal. hydrazine hydrate (85%). The feed rate of this solution will be controlled by an automatic pH controller, so as to maintain the pH at the desired level. Since the hydrazine will be added from the same solution, the exact ratio of hydrazine to soda ash required in the mixing tank must be established empirically so that the desired level of hydrazine is maintained in the treatment solution at all times. The hydrazine concentration should be kept at 500-700 ppm and the pH at 7.5 to 8.5.

### 2. Chemical Control

#### (a) Treatment Solution

These chemical tests are performed on samples of the treatment solution taken from the influent to the treatment wash tanks before the solution comes in contact with the work pieces.

**PART A:**

Waste Manifest No. 100-100-100

| NAME   | SITE ADDRESS                              | PHONE NO.    | EPA I.D. NO.        |
|--|---|--------------|---------------------|
| GENERATOR  | 1701 Wheeling Ave.<br>Baltimore, MD 21201 | 410-538-1100 | 01-0000000000000000 |
| TRANSPORTER NO. 1  | 1701 Wheeling Ave.<br>Baltimore, MD 21201 | 410-538-1100 | 01-0000000000000000 |
| TRANSPORTER NO. 2 (IF ANY)   |   |              | 01-0000000000000000 |
| TREATMENT STORAGE OR<br>DISPOSAL FACILITY<br>CECOS INTERNATIONAL, INC. | 5000 Faint Rd.<br>Baltimore, MD 21201     | 410-538-1100 | 01-0000000000000000 |

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO. \_\_\_\_\_ OUT OF A TOTAL OF \_\_\_\_\_ THE FIRST MANIFEST DOCUMENT NO IS \_\_\_\_\_

[illegible]

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA, and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

|   |   |   |  |                       |   |
|---|---|---|--|-----------------------|---|
| GENERATOR'S SIGNATURE<br><i>[Signature]</i> |   | TITLE   | DATE SHIPPED   | EXPECTED ARRIVAL DATE | TRAILER LICENSE NUMBER                    |
| TRANSPORTER VEHICLE I.D. NO.                | <div style="border: 1px solid black; width: 20px; height: 20px;"></div> | <div style="border: 1px solid black; width: 60px; height: 20px;"></div> | TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT<br><i>[Signature]</i> |                       | DATE RECEIVED<br>Month      Day      Year |
|   | STATE   | N.Y.S. WASTE HAULER PERMIT NO.  |  |                       |   |

## PART 8:

|   |  |       |  |        |       |  |  |   |  |                          |                          |  |  |
|---|--|-------|--|--------|-------|--|--|---|--|--------------------------|--------------------------|--|--|
| TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   |  |       |  |        |       |  |  |   |  | DATE DELIVERED           |                          |  |  |
|   |  |       |  |        |       |  |  |   |  | Month      Day      Year |                          |  |  |
| TRANSPORTER NO. 2 VEHICLE I.D. NO.  |  | STATE |  | NUMBER |       |  |  | STATE NUMBER TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT |  |                          | DATE RECEIVED            |  |  |
|   |  |       |  |        |       |  |  |   |  |                          | Month      Day      Year |  |  |
| TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   |  |       |  |        |       |  |  |   |  | DATE DELIVERED           |                          |  |  |
|   |  |       |  |        |       |  |  |   |  | Month      Day      Year |                          |  |  |
| TREATMENT STORAGE OR DISPOSAL FACILITY OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS |  |       |  |        |       |  |  |   |  | HANDLING METHOD          |                          |  |  |
|   |  |       |  |        |       |  |  |   |  | 1                        |                          |  |  |
|   |  |       |  |        |       |  |  |   |  | 2                        |                          |  |  |
|   |  |       |  |        |       |  |  |   |  | 3                        |                          |  |  |
|   |  |       |  |        |       |  |  |   |  | 4                        |                          |  |  |
| TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE AND CERTIFICATION  |  |       |  |        | TITLE |  |  |   |  | DATE RECEIVED            |                          |  |  |
|   |  |       |  |        |       |  |  |   |  | Month      Day      Year |                          |  |  |

WHITE - CECOS

**CANARY - Invoice**

### PINK - Hauler's

**GOLDENROD - Generator's**

**Uniform State  
HAZARDOUS WASTE MANIFEST**

Work Order No. 92399

**PART A:**

Waste Manifest No. 92-7-005

| NAME  | SITE ADDRESS  | PHONE NO.           | EPA I.D. NO.              |
|---|---|---------------------|---------------------------|
| GENERATOR<br><b>TRIANGLE PWC</b>  | <b>1701 Wheeling Ave<br/>Blondale West Virginia</b> | <b>304-245-4020</b> | <b>SM Quantity Exempt</b> |
| TRANSPORTER NO. 1<br><b>TOM WINDA TANK</b>                                    | <b>15026 133 South<br/>Blanchester Ohio</b>         | <b>513-724-6110</b> | <b>OH 110191764430</b>    |
| TRANSPORTER NO. 2 (IF ANY)  |   |                     |                           |
| TREATMENT STORAGE OR<br>DISPOSAL FACILITY<br><b>CECOS INTERNATIONAL, INC.</b> | <b>5092 FIBER RD<br/>WILLIAMSBURG OH 43176</b>      | <b>513-724-6110</b> | <b>OH 1101817432744</b>   |

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE  
THIS FORM IS NO. \_\_\_\_\_ OUT OF A TOTAL OF \_\_\_\_\_ THE FIRST MANIFEST DOCUMENT NO IS \_\_\_\_\_

GENERATOR

| PROPER U.S. DOT<br>SHIPPING NAME        | CECOS<br>PROD.<br>CODE | U.S. DOT<br>HAZARD CLASS | UN<br>NUMBER | FORM     |        |     |        | QUANTITY      | UNITS    |          |        |      | CONTAINERS<br>NO. TYPE | EPA<br>HAZ.<br>CODE | EPA<br>WASTE TYPE |
|---|------------------------|--------------------------|--------------|----------|--------|-----|--------|---------------|----------|----------|--------|------|------------------------|---------------------|-------------------|
|   |                        |                          |              | SOLID    | LIQUID | GAS | SLUDGE |               | GALLONS  | CU. YDS. | POUNDS | TONS |                        |                     |                   |
| 1. <b>HAZARDOUS WASTE<br/>SOLID NOS</b> | <b>A</b>               | <b>ORM-G</b>             | <b>9189</b>  | <b>X</b> |        |     |        | <b>210</b>    | <b>X</b> |          |        |      | <b>1 Bulk</b>          | <b>N/A</b>          |                   |
| 2                                       |                        |                          |              |          |        |     |        |               |          |          |        |      |                        |                     |                   |
| 3                                       |                        |                          |              |          |        |     |        |               |          |          |        |      |                        |                     |                   |
| 4                                       |                        |                          |              |          |        |     |        |               |          |          |        |      |                        |                     |                   |
| 5                                       |                        |                          |              |          |        |     |        |               |          |          |        |      |                        |                     |                   |
| 6                                       |                        |                          |              |          |        |     |        | <b>17,564</b> |          |          |        |      |                        |                     |                   |

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

**66 PPM CYANIDE**

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA, and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

|  |                 |   |                       |   |
|--|-----------------|---|-----------------------|---|
| GENERATOR'S SIGNATURE<br><b>*Charles Mc Clavin</b> | TITLE           | DATE SHIPPED<br><b>12/5/83</b>  | EXPECTED ARRIVAL DATE | TRAILER LICENSE NUMBER<br><b>112 + 18 6</b>       |
| TRANSPORTER<br>VEHICLE<br>I.D. NO. <b>111</b>      | STATE <b>NY</b> | TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF<br>RECEIPT OF SHIPMENT<br><b>[Signature]</b> |                       | DATE RECEIVED<br><b>12 5 83</b><br>Month Day Year |

To be filled out by  
TRANSPORTER

**PART B:**

|   |  |
|---|--|
| TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT<br><b>[Signature]</b> | DATE DELIVERED<br><b>12-5-83</b><br>Month Day Year                                   |
| TRANSPORTER NO. 2 VEHICLE<br>I.D. NO. _____<br>STATE _____ NUMBER _____   | STATE NUMBER TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF<br>RECEIPT OF SHIPMENT |
| TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT                       | DATE RECEIVED<br>Month Day Year  |
|   | DATE DELIVERED<br>Month Day Year   |

To be filled out by  
TSD FACILITY

|  |   |
|--|---|
| TREATMENT STORAGE OR DISPOSAL FACILITY OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION<br>OF REJECTED MATERIALS | HANDLING<br>METHOD<br>1 <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>4 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE AND CERTIFICATION<br><b>[Signature]</b>   |   |
| TITLE<br><b>QC</b>   |   |
| DATE RECEIVED<br><b>12 5 83</b><br>Month Day Year  |   |

A SUBSIDIARY OF TRIANGLE INDUSTRIES, INC.  
P O Box 711/New Brunswick, New Jersey 08903 / (201) 745-5500

SHIP  
TO

HUKILL CHEMICAL  
7013 KRICK RD  
BEDFORD, OHIO 44146

PAGE  
NO.

| C.C. | CONTAINER       | NUMBER | WEIGHT | C.C. | CONTAINER   | NUMBER | WEIGHT |
|------|-----------------|--------|--------|------|---|--------|--------|
| A    | LOOSE<br>PIECES |        |        | H    | LENGTHS   |        |        |
| B    | CARTONS         |        |        | I    | CASES   |        |        |
| C    | BUNDLES         |        |        | J    | SPOOLS  |        |        |
| D    | COILS           |        |        | K    | POWER SUPPLY<br>COROS-1 MALE<br>PLUG ONLY<br>IN BOXES |        |        |
| E    | RET.            | REELS  |        | L    | DRUMS   |        |        |
| G    | NON-RET.        |        |        |      |   |        |        |
| F    | BAGS            |        |        | M    | PALLETS   |        |        |
|      |                 |        |        |      |   |        |        |

DATE  
OF  
SHIPMENT

5/5/86

| CUSTOMER NO. | TERR. NO. | CUSTOMER ORDER NO. AND DATE | TRANS. | TO BE SHIPPED |      |           | DELIVERY - F.O.B. | INVOICE NO. |
|--------------|-----------|-----------------------------|--------|---------------|------|-----------|-------------------|-------------|
|              |           |                             |        | FROM          | CODE | SCHEDULED |                   |             |
|              |           | MO. DAY YR                  |        |               |      |           |                   | 709950A     |

[illegible]



MANFREDI MOTOR TRANSIT CO.

PICKUP COPY

DATE 5-15-86 DRIVER NO. 1 5111 DRIVER NO. 2 \_\_\_\_\_PRO # 45-142 TRACTOR # 70 TRAILER # 4093 SHIPPER # \_\_\_\_\_

Consignee has verified that a connection has been made from the proper trailer outlet to the proper storage facility and that the vendor bill of lading is in accordance with the proper material ordered.

SHIPPER Triangle PWC CONSIGNEE Hickory Chem Consignee's SignatureORIGIN Hendale W.V. DESTINATION 15 Wood Ch.LOADING DATE \_\_\_\_\_ PRELOADED? ☐ UNLOADING DATE \_\_\_\_\_

APPOINTMENT TIME \_\_\_\_\_ AM \_\_\_\_\_ PM SCHEDULED DELIVERY TIME \_\_\_\_\_ AM \_\_\_\_\_ PM

TERMINAL START TIME 300 AM \_\_\_\_\_ PM ARRIVED AT SCALES \_\_\_\_\_ AM \_\_\_\_\_ PMARRIVED AT SCALES 630 AM \_\_\_\_\_ PM ARRIVED AT DELIVERY SITE \_\_\_\_\_ AM \_\_\_\_\_ PMARRIVED AT LOAD SITE 830 AM \_\_\_\_\_ PM START UNLOADING \_\_\_\_\_ AM \_\_\_\_\_ PMSTART LOADING 900 AM \_\_\_\_\_ PM FINISH UNLOADING \_\_\_\_\_ AM \_\_\_\_\_ PMFINISH LOADING 1034 AM \_\_\_\_\_ PM LEFT DELIVERY SITE \_\_\_\_\_ AM \_\_\_\_\_ PM

LEFT LOADING SITE \_\_\_\_\_ AM \_\_\_\_\_ PM LEFT SCALES \_\_\_\_\_ AM \_\_\_\_\_ PM

LEFT SCALES \_\_\_\_\_ AM \_\_\_\_\_ PM RETURNED TERMINAL \_\_\_\_\_ AM \_\_\_\_\_ PM

TOTAL DEMURRAGE TIME \_\_\_\_\_ HOURS TOTAL DEMURRAGE TIME \_\_\_\_\_ HOURS

CHECK ONE: ☒ TRUCK PUMP ☐ CUSTOMER PUMP CHECK ONE: ☐ TRUCK PUMP ☐ CUSTOMER PUMPLOADING REMARKS: UMP OUT UNLOADING REMARKS: \_\_\_\_\_Under Ground Tank \_\_\_\_\_4500 lbs. \_\_\_\_\_

TARE WT. \_\_\_\_\_ GROSS WT. \_\_\_\_\_ NET WT. \_\_\_\_\_ TOTAL HOURS \_\_\_\_\_

SHIPPER'S SIGNATURE Thomas M. Clavin CONSIGNEE'S SIGNATURE \_\_\_\_\_

**Uniform State  
HAZARDOUS WASTE MANIFEST**

Work Order No. \* 92356

**PART A:**

Waste Manifest No. 55 9219 002

| NAME   | SITE ADDRESS   | PHONE NO.           | EPA I.D. NO.                    |
|--|--|---------------------|---------------------------------|
| GENERATOR<br><b>TRIANGLE PWC</b>   | <b>1701 WHEELING AVE<br/>GLENDONIA WEST VIRGINIA</b> | <b>304-846-4020</b> | <b>Small Quantity Generator</b> |
| TRANSPORTER NO. 1<br><b>TOMAWANDA TACK</b>                                 | <b>1140 MILITARY RD<br/>BUFFALO NEW YORK</b>         | <b>518-734-6114</b> | <b>NY D101810131613141</b>      |
| TRANSPORTER NO. 2 (IF ANY)   |  |                     |                                 |
| TREATMENT STORAGE OR DISPOSAL FACILITY<br><b>CECOS INTERNATIONAL, INC.</b> | <b>5092 ABER RD<br/>WILLIAMSBURG OHIO 43776</b>      | <b>513-734-6114</b> | <b>OH D101817413171414</b>      |

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO. \_\_\_\_\_ OUT OF A TOTAL OF \_\_\_\_\_ THE FIRST MANIFEST DOCUMENT NO IS \_\_\_\_\_

| PROPER U.S. DOT SHIPPING NAME   | CECOS PROD. CODE | U.S. DOT HAZARD CLASS | UN NUMBER | FORM  |        |     |        | QUANTITY | UNITS   |          |        |      | CONTAINERS |      | EPA HAZ. CODE | EPA WASTE TYPE |  |  |
|---------------------------------|------------------|-----------------------|-----------|-------|--------|-----|--------|----------|---------|----------|--------|------|------------|------|---------------|----------------|--|--|
|                                 |                  |                       |           | SOLID | LIQUID | GAS | SLUDGE |          | GALLONS | CU. YDS. | POUNDS | TONS |            |      |               |                |  |  |
| HAZARDOUS WASTE<br>1 SOLID Dose | A<br>3531        | ORM-C                 | 9189      | X     |        |     |        | 20       |         | X        |        |      | 1          | Bulk | N/A           |                |  |  |
| 2                               |                  |                       |           |       |        |     |        |          |         |          |        |      |            |      |               |                |  |  |
| 3                               |                  |                       |           |       |        |     |        |          |         |          |        |      |            |      |               |                |  |  |
| 4                               |                  |                       |           |       |        |     |        |          |         |          |        |      |            |      |               |                |  |  |
| 5                               |                  |                       |           |       |        |     |        |          |         |          |        |      |            |      |               |                |  |  |
| 6                               |                  |                       |           |       |        |     |        |          |         |          |        |      |            |      |               |                |  |  |

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

**CYANIDE 66 PPM**

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA, and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

|  |                     |  |  |  |
|--|---------------------|--|--|--|
| GENERATOR'S SIGNATURE<br><b>* Chuck J. ...</b> | TITLE<br><b>...</b> | DATE SHIPPED<br><b>11/30/83</b>  | EXPECTED ARRIVAL DATE<br><b>11/30/83</b> | TRAILER LICENSE NUMBER<br><b>578039</b>            |
| TRANSPORTER VEHICLE I.D. NO.<br><b>...</b>     | STATE<br><b>NY</b>  | TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT<br><b>* ...</b> |  | DATE RECEIVED<br><b>11 30 83</b><br>Month Day Year |

**PART B:**

|   |                     |                                  |   |
|---|---------------------|----------------------------------|---|
| TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   |                     | DATE DELIVERED<br>Month Day Year |   |
| TRANSPORTER NO. 2 VEHICLE I.D. NO.<br><b>...</b>  | STATE<br><b>...</b> | NUMBER<br><b>...</b>             | STATE NUMBER TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT |
| TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT   |                     | DATE RECEIVED<br>Month Day Year  |   |
| TREATMENT STORAGE OR DISPOSAL FACILITY OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS |                     | DATE DELIVERED<br>Month Day Year |   |
|   |                     | HANDLING METHOD                  |   |
|   |                     | 1                                |   |
|   |                     | 2                                |   |
|   |                     | 3                                |   |
| TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE AND CERTIFICATION  |                     | DATE RECEIVED<br>Month Day Year  |   |

**Uniform State  
HAZARDOUS WASTE MANIFEST**

Work Order No. 92368

Waste Manifest No. SS 9219-003

| NAME                            | SITE ADDRESS           | PHONE NO.    | EPA I.D. NO.       |
|---------------------------------|------------------------|--------------|--------------------|
| ATOR                            | 1701 WHEELING AVE      |              | SM QUANTITY EXCEPT |
| WALE PWC                        | GLENDALC WEST VIRGINIA | 304-845-4010 |                    |
| PORTER NO. 1                    | 15020 133 SOUTH        |              |                    |
| ALWANDA TRUCK                   | PLUMMER ST. OH.        | 513-783-2010 | N11D109171444801   |
| PORTER NO. 2 (IF ANY)           |                        |              |                    |
| MENT STORAGE OR<br>SAL FACILITY | 5092 ABER RD           |              |                    |
| JS INTERNATIONAL, INC.          | WILLIAMSBURG OHIO 4576 | 513-734-6114 | 014D10181714317144 |

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO. \_\_\_\_\_ OUT OF A TOTAL OF \_\_\_\_\_

THE FIRST MANIFEST DOCUMENT NO IS \_\_\_\_\_

| PROPER U.S. DOT<br>SHIPPING NAME | CECOS<br>PROD.<br>CODE | U.S. DOT<br>HAZARD CLASS | UN<br>NUMBER | FORM  |        |     |        | QUANTITY | UNITS   |          |        |      | CONTAINERS<br>NO. TYPE | EPA<br>HAZ.<br>CODE | EPA<br>WASTE TYPE |
|----------------------------------|------------------------|--------------------------|--------------|-------|--------|-----|--------|----------|---------|----------|--------|------|------------------------|---------------------|-------------------|
|                                  |                        |                          |              | SOLID | LIQUID | GAS | SLUDGE |          | GALLONS | CU. YDS. | POUNDS | TONS |                        |                     |                   |
| HAZARDOUS WASTE                  | A                      | ORM-G                    | 9189         | X     |        |     |        | 20       |         |          |        |      | 1                      | BULK                | U14               |
| lid Nos                          | 3621                   |                          |              |       |        |     |        |          |         |          |        |      |                        |                     |                   |
|                                  |                        |                          |              |       |        |     |        |          |         |          |        |      |                        |                     |                   |
|                                  |                        |                          |              |       |        |     |        |          |         |          |        |      |                        |                     |                   |
|                                  |                        |                          |              |       |        |     |        |          |         |          |        |      |                        |                     |                   |
|                                  |                        |                          |              |       |        |     |        |          |         |          |        |      |                        |                     |                   |
|                                  |                        |                          |              |       |        |     |        |          |         |          |        |      |                        |                     |                   |
|                                  |                        |                          |              |       |        |     |        |          |         |          |        |      |                        |                     |                   |

ADDITIONAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NON-HAZARDOUS NATURE) DO NOT HAVE TO BE MANIFESTED

CYANIDE 66 ppm

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA, and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

|   |             |  |                                   |   |
|---|-------------|--|-----------------------------------|---|
| GENERATOR'S SIGNATURE<br><i>James M. Lin</i>  | TITLE<br>   | DATE SHIPPED<br>11/31/83   | EXPECTED ARRIVAL DATE<br>11/31/83 | TRAILER LICENSE NUMBER<br>9482              |
| SPORTER<br>ILE<br>O.                          | STATE<br>NY | TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF<br>RECEIPT OF SHIPMENT<br><i>James M. Lin</i> |                                   | DATE RECEIVED<br>11 31 83<br>Month Day Year |
| N.Y.S. WASTE HAULER PERMIT NO.<br>20992644801 |             |  |                                   |   |

|  |             |   |
|--|-------------|---|
| SPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT<br><i>James M. Lin</i> |             | DATE DELIVERED<br>Month 11 Day 31 Year 83 |
| SPORTER<br>VEHICLE<br>O.   | STATE<br>NY | DATE RECEIVED<br>Month Day Year           |
| SPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT                        |             | DATE DELIVERED<br>Month Day Year          |

TREATMENT STORAGE OR DISPOSAL FACILITY OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION OF REJECTED MATERIALS

HANDLING  
METHOD

|   |  |  |  |
|---|--|--|--|
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |

|   |             |   |
|---|-------------|---|
| TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE AND CERTIFICATION<br><i>William T. Lin</i> | TITLE<br>WC | DATE RECEIVED<br>11 31 83<br>Month Day Year |
|---|-------------|---|



Uniform State  
HAZARDOUS WASTE MANIFEST

Work Order No. 92369

PART A:

Waste Manifest No. 55 9219-00

| NAME   | SITE ADDRESS                                       | PHONE NO.    | EPA I.D. NO.         |
|--|--|--------------|----------------------|
| GENERATOR<br>BIANALE PWC   | 1701 WHEELING AVE<br>GLENDALE WEST VIRGINIA        | 704-497-1010 | SM 000017 L 0001PT   |
| TRANSPORTER NO. 1<br>SMITHLAND TANK                                    | 15026 133 SOUTH<br>BLANCHARD OHIO                  | 313-754-6014 | 1111009794912011     |
| TRANSPORTER NO. 2 (IF ANY)   |  |              |                      |
| TREATMENT STORAGE OR<br>DISPOSAL FACILITY<br>CECOS INTERNATIONAL, INC. | 5092 FIBER RD<br>1011 HANCOCK RD<br>GOLDENROD OHIO | 613-754-6014 | 01110193121413171914 |

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO. \_\_\_\_\_ OUT OF A TOTAL OF \_\_\_\_\_ THE FIRST MANIFEST DOCUMENT NO IS \_\_\_\_\_

| PROPER U.S. DOT<br>SHIPPING NAME | CECOS<br>PROD.<br>CODE | U.S. DOT<br>HAZARD CLASS | UN<br>NUMBER | FORM  |        |     |        | QUANTITY | UNITS   |         |        |      | CONTAINERS<br>NO. TYPE | EPA<br>HAZ.<br>CODE | EPA<br>WASTE TYPE |
|----------------------------------|------------------------|--------------------------|--------------|-------|--------|-----|--------|----------|---------|---------|--------|------|------------------------|---------------------|-------------------|
|                                  |                        |                          |              | SOLID | LIQUID | GAS | SLUDGE |          | GALLONS | CU. YDS | POUNDS | TONS |                        |                     |                   |
| HAZARDOUS WASTE<br>1 SOLID NOS   | 233                    | ORM-6                    | 7189         | X     |        |     |        | 20       |         | X       |        |      | 1 Bulk                 | NA                  |                   |
| 2                                |                        |                          |              |       |        |     |        |          |         |         |        |      |                        |                     |                   |
| 3                                |                        |                          |              |       |        |     |        |          |         |         |        |      |                        |                     |                   |
| 4                                |                        |                          |              |       |        |     |        |          |         |         |        |      |                        |                     |                   |
| 5                                |                        |                          |              |       |        |     |        |          |         |         |        |      |                        |                     |                   |
| 6                                |                        |                          |              |       |        |     |        | 29,260   |         |         |        |      |                        |                     |                   |

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

66 JPM CYANIDE

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA, and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

|   |              |  |                                  |   |
|---|--------------|--|----------------------------------|---|
| GENERATOR'S SIGNATURE<br>Chuck M. Lavin   | TITLE<br>E16 | DATE SHIPPED<br>12/1/83  | EXPECTED ARRIVAL DATE<br>12/2/83 | TRAILER LICENSE NUMBER<br>S72009 NV     |
| TRANSPORTER<br>VEHICLE<br>I.D. NO.<br>N11 | STATE<br>NY  | TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF<br>RECEIPT OF SHIPMENT<br>[Signature] |                                  | DATE RECEIVED<br>12 Month 1 Day 83 Year |

PART B:

|  |  |
|--|--|
| TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT<br>[Signature]   | DATE DELIVERED<br>12-2-83<br>Month Day Year  |
| TRANSPORTER NO. 2 VEHICLE<br>I.D. NO.<br>STATE<br>NUMBER   | STATE NUMBER TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF<br>RECEIPT OF SHIPMENT |
| TRANSPORTER NO. 2 SIGNATURE AND CERTIFICATION OF DELIVERY AND NON-TAMPERING WITH SHIPMENT  | DATE RECEIVED<br>Month Day Year  |
| TREATMENT STORAGE OR DISPOSAL FACILITY OF ANY DIFFERENCES BETWEEN MANIFEST AND SHIPMENT OR LISTING OF REASONS FOR AND DISPOSITION<br>OF REJECTED MATERIALS | HANDLING<br>METHOD<br>1 2 3 4  |
| TREATMENT STORAGE OR DISPOSAL FACILITY SIGNATURE AND CERTIFICATION<br>[Signature]  | TITLE<br>[Signature]   |
| DATE RECEIVED<br>12/2/83<br>Month Day Year   |  |

WHITE - CECOS

CANARY - Invoice

PINK - Hauler's

GOLDENROD - Generator's

|   |  |   |  |   |  |  |  |   |  |                                   |  |               |  |                                   |  |  |  |
|---|--|---|--|---|--|--|--|---|--|-----------------------------------|--|---------------|--|-----------------------------------|--|--|--|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>   |  | 1. Generator's US EPA ID No.<br><b>WVP000000589</b> |  | Manifest Document No.<br><b>I-05249B</b>    |  | 2. Page 1 of 1                               |  | Information in the shaded areas is not required by Federal law. |  |                                   |  |               |  |                                   |  |  |  |
| 3. Generator's Name and Mailing Address<br><b>TRIANGLE PMC, 1701 Wheeling Avenue, Glendale, W. Va. 26038</b>  |  |   |  |   |  | A. State Manifest Document Number            |  |   |  |                                   |  |               |  |                                   |  |  |  |
| 4. Generator's Phone ( 304 ) <b>845-4020</b>  |  |   |  |   |  | B. State Generator's ID                      |  |   |  |                                   |  |               |  |                                   |  |  |  |
| 5. Transporter 1 Company Name<br><b>Manfredi Motor Transit Co.</b>  |  |   |  | 6. US EPA ID Number<br><b>OHD002834919</b>  |  | C. State Transporter's ID                    |  |   |  |                                   |  |               |  |                                   |  |  |  |
| 7. Transporter 2 Company Name   |  |   |  | 8. US EPA ID Number                         |  | D. Transporter's Phone                       |  |   |  |                                   |  |               |  |                                   |  |  |  |
| 9. Designated Facility Name and Site Address<br><b>Hukill Chemical Corporation<br/>7013 Krick Road<br/>Bedford, Ohio 44146</b>  |  |   |  | 10. US EPA ID Number<br><b>OHD001926740</b> |  | E. State Transporter's ID                    |  |   |  |                                   |  |               |  |                                   |  |  |  |
|   |  |   |  |   |  | F. Transporter's Phone                       |  |   |  |                                   |  |               |  |                                   |  |  |  |
|   |  |   |  |   |  | G. State Facility's ID                       |  |   |  |                                   |  |               |  |                                   |  |  |  |
|   |  |   |  |   |  | H. Facility's Phone<br><b>(216) 232-9400</b> |  |   |  |                                   |  |               |  |                                   |  |  |  |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)   |  |   |  |   |  | 12. Containers                               |  | 13. Total Quantity  |  | 14. Unit Wt/Vol                   |  | 15. Waste No. |  |                                   |  |  |  |
| a. <input checked="" type="checkbox"/> <b>Waste Combustible Liquid NOS</b> <b>NA1993</b>  |  |   |  |   |  | 1  |  | T/W   |  | <b>4500 gals</b>                  |  |               |  |                                   |  |  |  |
| b.  |  |   |  |   |  |  |  |   |  |                                   |  |               |  |                                   |  |  |  |
| c.  |  |   |  |   |  |  |  |   |  |                                   |  |               |  |                                   |  |  |  |
| d.  |  |   |  |   |  |  |  |   |  |                                   |  |               |  |                                   |  |  |  |
| J. Additional Descriptions for Materials Listed Above   |  |   |  |   |  | K. Handling Codes for Wastes Listed Above    |  |   |  |                                   |  |               |  |                                   |  |  |  |
| 15. Special Handling Instructions and Additional Information  |  |   |  |   |  |  |  |   |  |                                   |  |               |  |                                   |  |  |  |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br>Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. |  |   |  |   |  |  |  |   |  |                                   |  |               |  |                                   |  |  |  |
| Printed/Typed Name<br><b>CHARLES McCLARIN</b>   |  |   |  |   |  | Signature<br><i>Charles McClarin</i>         |  |   |  | Month Day Year<br><b>15 15 86</b> |  |               |  |                                   |  |  |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials   |  |   |  |   |  | Printed/Typed Name<br><b>Earl White</b>      |  |   |  | Signature<br><i>Earl White</i>    |  |               |  | Month Day Year<br><b>15 15 86</b> |  |  |  |
| 18. Transporter 2 Acknowledgement of Receipt of Materials   |  |   |  |   |  | Printed/Typed Name                           |  |   |  | Signature                         |  |               |  | Month Day Year                    |  |  |  |
| 19. Discrepancy Indication Space  |  |   |  |   |  |  |  |   |  |                                   |  |               |  |                                   |  |  |  |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  |  |   |  |   |  |  |  |   |  |                                   |  |               |  |                                   |  |  |  |
| Printed/Typed Name<br><b>Delbert H. Syors</b>   |  |   |  |   |  | Signature<br><i>Delbert H. Syors</i>         |  |   |  | Month Day Year<br><b>10 05 86</b> |  |               |  |                                   |  |  |  |

|   |  |  |  |   |  |  |  |   |  |                                   |  |               |  |
|---|--|--|--|---|--|--|--|---|--|-----------------------------------|--|---------------|--|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>             |  | 1. Generator's US EPA ID No.<br><b>WVF000000589</b>  |  | Manifest Document No.<br><b>I-05249B</b>    |  | 2. Page 1 of 1                               |  | Information in the shaded areas is not required by Federal law. |  |                                   |  |               |  |
|   |  | 3. Generator's Name and Mailing Address<br><b>TRIANGLE PMC, 1701 Wheeling Avenue, Glendale, W. Va. 26038</b>   |  | 6. US EPA ID Number<br><b>OH0002834919</b>  |  | A. State Manifest Document Number            |  |   |  |                                   |  |               |  |
| 4. Generator's Phone ( <b>304</b> ) <b>845-4020</b> |  | 7. Transporter 1 Company Name<br><b>Manfredi Motor Transit Co.</b>   |  | 8. US EPA ID Number                         |  | B. State Generator's ID                      |  |   |  |                                   |  |               |  |
| 5. Transporter 2 Company Name                       |  | 9. Designated Facility Name and Site Address<br><b>Hukill Chemical Corporation<br/>7013 Krick Road<br/>Bedford, Ohio 44146</b>   |  | 10. US EPA ID Number<br><b>OH0001926740</b> |  | C. State Transporter's ID                    |  |   |  |                                   |  |               |  |
|   |  |  |  |   |  | D. Transporter's Phone                       |  |   |  |                                   |  |               |  |
|   |  |  |  |   |  | E. State Transporter's ID                    |  |   |  |                                   |  |               |  |
|   |  |  |  |   |  | F. Transporter's Phone                       |  |   |  |                                   |  |               |  |
|   |  |  |  |   |  | G. State Facility's ID                       |  |   |  |                                   |  |               |  |
|   |  |  |  |   |  | H. Facility's Phone<br><b>(216) 232-9400</b> |  |   |  |                                   |  |               |  |
| GENERATOR   |  | 11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)  |  |   |  | 12. Containers                               |  | 13. Total Quantity  |  | 14. Unit Wt/Vol                   |  | 15. Waste No. |  |
|   |  | a. <input checked="" type="checkbox"/> <b>Waste Combustible Liquid NOS</b> <b>HA1993</b>   |  |   |  | No. <b>1</b> Type <b>T/W</b>                 |  | <b>4500</b>   |  | <b>G</b>                          |  |               |  |
|   |  | b.   |  |   |  |  |  |   |  |                                   |  |               |  |
|   |  | c.   |  |   |  |  |  |   |  |                                   |  |               |  |
|   |  | d.   |  |   |  |  |  |   |  |                                   |  |               |  |
| TRANSPORTER   |  | J. Additional Descriptions for Materials Listed Above  |  |   |  |  |  | K. Handling Codes for Wastes Listed Above                       |  |                                   |  |               |  |
|   |  |  |  |   |  |  |  |   |  |                                   |  |               |  |
| FACILITY  |  | 15. Special Handling Instructions and Additional Information   |  |   |  |  |  |   |  |                                   |  |               |  |
|   |  | 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described as to proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br>Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. |  |   |  |  |  |   |  |                                   |  |               |  |
|   |  | Printed/Typed Name<br><b>CHARLES McCLARIN</b>  |  |   |  | Signature<br><i>Charles McClarin</i>         |  |   |  | Month Day Year<br><b>15 15 86</b> |  |               |  |
|   |  | 17. Transporter 1 Acknowledgement of Receipt of Materials  |  |   |  |  |  |   |  |                                   |  |               |  |
|   |  | Printed/Typed Name   |  |   |  | Signature                                    |  |   |  | Month Day Year                    |  |               |  |
|   |  | 18. Transporter 2 Acknowledgement of Receipt of Materials  |  |   |  |  |  |   |  |                                   |  |               |  |
|   |  | Printed/Typed Name   |  |   |  | Signature                                    |  |   |  | Month Day Year                    |  |               |  |
|   |  | 19. Discrepancy Indication Space   |  |   |  |  |  |   |  |                                   |  |               |  |
|   |  | 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.   |  |   |  |  |  |   |  |                                   |  |               |  |
|   |  | Printed/Typed Name   |  |   |  | Signature                                    |  |   |  | Month Day Year                    |  |               |  |

(2)

SUPPLEMENTAL MEMO

Triangle PWC, Glen Dale Plant, West Virginia

WVD004314928

March 10, 1987

James R. Fenske, West Virginia Department of Natural Resources, Division  
of Waste Management

Following the March 6, 1987 CEI, I talked with Mr. McClarin via phone conversation about the cyanide storage tanks and the two underground storage tanks. Mr. McClarin stated that Triangle PWC had already notified the Division of Waste Management about the facility's underground storage tanks. Mr. McClarin also stated that there should have been no cyanide tanks except for maybe one to two of the tanks (e.g.- the tank where the readings were 34 ppm).

The tank testing by Pittsburgh Testing Laboratory involved taking pieces of the actual tanks for samples. We then discussed further decontamination methods for the tanks including sandblasting the tanks or chemical treatment if deemed to be necessary by the West Virginia Department of Natural Resources. Mr. McClarin stated he would discuss the cyanide tank issue further with Mr. Rob Jelacic, Hazardous Waste Management Section Leader, about what procedures Triangle PWC should take.

RECEIVED

APR 17 1987

Department of Natural Resources  
Division of Waste Management

U.S. Environmental Protection Agency  
Region III  
Wheeling Field Section  
303 Methodist Bldg., 11th & Chapline Sts.  
Wheeling, WV. 26003

*Handwritten:* Hardin Eubank

DATE: August 12, 1983

SUBJECT: Trip Report-RCRA Inspection-Triangle PWC, Inc., Glendale, WV.

FROM: James L. Bailey, Engineering Technician *JB*  
Wheeling Field Section, Water Unit (3ES13)

TO: Gary V. Bryant, Acting Chief  
Wheeling Field Section (3ES13)

Date of trip: August 9, 1983

Place visited: Triangle PWC, Inc.  
Glendale, WV.  
EPA Generator ID # WVD005004536

Person Contacted: Mr. Charles McClarin  
Technical Superintendent

The work activities at Triangle PWC are hot dip galvanizing of pipe and strip and electro-plating pipe and strip with acid zinc. The pickling solutions are sulfuric acid and hydrochloric acid.

The spent pickling solution goes to Central Waste Treatment where it is neutralized with lime. The supernate (pH range 8.0 to 9.0) is discharged through their NPDES outfall. The dewatered sludge is stored on site and periodically trucked to the Wheeling, WV., landfill. West Virginia Department of Natural Resources has approved of this disposal method with the stipulation that the sludge be mixed with the cover material.

Recently 3,265 tons of sludge (generated over two full years of operation) was taken to the Wheeling landfill. Section 265.1(c)(10), elementary neutralization exempts Triangle PWC from the RCRA Regulation. Also at Triangle, according to Mr. McClarin, is a cyanide plating tank containing dried sludge with 66.1 mg/kg of cyanide. The cyanide plating unit has not been used in eight years.

The dried sludge will be removed in the near future. The removal will be handled by CECOS the sludge is to be taken to the industrial landfill near Cincinnati, Oh., and the manifest system will be used.



# EVALUATION - VIOLATION - ENFORCEMENT FORM I

|                      |   |   |   |   |   |   |   |   |   |                       |   |   |     |                     |     |     |     |     |     |     |     |     |     |     |
|----------------------|---|---|---|---|---|---|---|---|---|-----------------------|---|---|-----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>HANDLER</b>       |   |   |   |   |   |   |   |   |   | <b>Date Submitted</b> |   |   |     |                     |     |     |     |     |     |     |     |     |     |     |
| ID Number            | W | V | D | O | 0 | 4 | 3 | 1 | 4 | 9                     | 2 | 8 | LDF | [ ]                 | TSF | [ ] | INC | [ ] | LOG | [ ] | SGG | [x] | TRA | [ ] |
| Handler Name         |   |   |   |   |   |   |   |   |   |                       |   |   |     |                     |     |     |     |     |     |     |     |     |     |     |
| Triangle PWC, Inc.   |   |   |   |   |   |   |   |   |   |                       |   |   |     |                     |     |     |     |     |     |     |     |     |     |     |
| Street               |   |   |   |   |   |   |   |   |   |                       |   |   |     | City                |     |     |     |     |     |     |     |     |     |     |
| 1701 Wheeling Avenue |   |   |   |   |   |   |   |   |   |                       |   |   |     | Glen Dale, WV 26038 |     |     |     |     |     |     |     |     |     |     |

|   |             |                 |     |        |     |       |     |                 |     |        |     |        |        |             |             |  |  |  |  |  |  |  |  |  |  |  |
|---|-------------|-----------------|-----|--------|-----|-------|-----|-----------------|-----|--------|-----|--------|--------|-------------|-------------|--|--|--|--|--|--|--|--|--|--|--|
| <b>EVALUATION</b>   |             |                 |     |        |     |       |     |                 |     | Add    | X   | Change | Delete |             |             |  |  |  |  |  |  |  |  |  |  |  |
| Date  |             | Number          |     | Agency |     | Type  |     | Reason          |     | Branch |     | Person |        |             |             |  |  |  |  |  |  |  |  |  |  |  |
| 09 10 91  |             | [ ] [ ] [ ] [ ] |     | S      |     | C E I |     | [ ] [ ] [ ] [ ] |     | C M    |     | P S B  |        |             |             |  |  |  |  |  |  |  |  |  |  |  |
| Areas of Evaluation ( EV - Evaluated, NE - Not Evaluated, NA - Not Applicable ) |             |                 |     |        |     |       |     |                 |     |        |     |        |        |             |             |  |  |  |  |  |  |  |  |  |  |  |
| GER   | [ ] [ ] [ ] | GOR             | N A | TGR    | N A | DCH   | N A | DGW             | N A | DHC    | N A | DPP    | N A    | CAS         | [ ] [ ] [ ] |  |  |  |  |  |  |  |  |  |  |  |
| GEX   | [ ] [ ] [ ] | GPT             | N A | TMR    | N A | DCL   | N A | DIN             | N A | DMR    | N A | DSI    | N A    | FEA         | [ ] [ ] [ ] |  |  |  |  |  |  |  |  |  |  |  |
| GGR   | N A         | GRR             | N A | TOR    | N A | DCP   | N A | DLB             | N A | DOR    | N A | DTR    | N A    | [ ] [ ] [ ] | [ ] [ ] [ ] |  |  |  |  |  |  |  |  |  |  |  |
| GLB   | N A         | GSC             | E V | TRR    | N A | DFR   | N A | DLF             | N A | DOT    | N A | DTT    | N A    | [ ] [ ] [ ] | [ ] [ ] [ ] |  |  |  |  |  |  |  |  |  |  |  |
| GMR   | N A         | GSQ             | E V | TWD    | N A | DGS   | N A | DLT             | N A | DPB    | N A | DWP    | N A    | [ ] [ ] [ ] | [ ] [ ] [ ] |  |  |  |  |  |  |  |  |  |  |  |
| Comments No Violations Noted  |             |                 |     |        |     |       |     |                 |     |        |     |        |        |             |             |  |  |  |  |  |  |  |  |  |  |  |

|                  |                 |                 |                 |                                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
|------------------|-----------------|-----------------|-----------------|----------------------------------|---------------------|-----------------|--|--|--|-----|--|--------|--------|--|--|--|--|--|--|--|--|--|--|
| <b>VIOLATION</b> |                 |                 |                 |                                  |                     |                 |  |  |  | Add |  | Change | Delete |  |  |  |  |  |  |  |  |  |  |
| Agency           | Number          | Area            | Class           | Regulation Type                  | Regulation Citation |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| [ ] [ ] [ ] [ ]  | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ]                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| Date Determined  | Priority        | Branch          | Person          | Returned to Compliance Scheduled |                     | Actual          |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| [ ] [ ] [ ] [ ]  | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ]                  |                     | [ ] [ ] [ ] [ ] |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| Comments         |                 |                 |                 |                                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |

|                  |                 |                 |                 |                                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
|------------------|-----------------|-----------------|-----------------|----------------------------------|---------------------|-----------------|--|--|--|-----|--|--------|--------|--|--|--|--|--|--|--|--|--|--|
| <b>VIOLATION</b> |                 |                 |                 |                                  |                     |                 |  |  |  | Add |  | Change | Delete |  |  |  |  |  |  |  |  |  |  |
| Agency           | Number          | Area            | Class           | Regulation Type                  | Regulation Citation |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| [ ] [ ] [ ] [ ]  | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ]                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| Date Determined  | Priority        | Branch          | Person          | Returned to Compliance Scheduled |                     | Actual          |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| [ ] [ ] [ ] [ ]  | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ]                  |                     | [ ] [ ] [ ] [ ] |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| Comments         |                 |                 |                 |                                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |

|                  |                 |                 |                 |                                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
|------------------|-----------------|-----------------|-----------------|----------------------------------|---------------------|-----------------|--|--|--|-----|--|--------|--------|--|--|--|--|--|--|--|--|--|--|
| <b>VIOLATION</b> |                 |                 |                 |                                  |                     |                 |  |  |  | Add |  | Change | Delete |  |  |  |  |  |  |  |  |  |  |
| Agency           | Number          | Area            | Class           | Regulation Type                  | Regulation Citation |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| [ ] [ ] [ ] [ ]  | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ]                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| Date Determined  | Priority        | Branch          | Person          | Returned to Compliance Scheduled |                     | Actual          |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| [ ] [ ] [ ] [ ]  | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ]                  |                     | [ ] [ ] [ ] [ ] |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| Comments         |                 |                 |                 |                                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |

|                  |                 |                 |                 |                                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
|------------------|-----------------|-----------------|-----------------|----------------------------------|---------------------|-----------------|--|--|--|-----|--|--------|--------|--|--|--|--|--|--|--|--|--|--|
| <b>VIOLATION</b> |                 |                 |                 |                                  |                     |                 |  |  |  | Add |  | Change | Delete |  |  |  |  |  |  |  |  |  |  |
| Agency           | Number          | Area            | Class           | Regulation Type                  | Regulation Citation |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| [ ] [ ] [ ] [ ]  | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ]                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| Date Determined  | Priority        | Branch          | Person          | Returned to Compliance Scheduled |                     | Actual          |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| [ ] [ ] [ ] [ ]  | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ] | [ ] [ ] [ ] [ ]                  |                     | [ ] [ ] [ ] [ ] |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |
| Comments         |                 |                 |                 |                                  |                     |                 |  |  |  |     |  |        |        |  |  |  |  |  |  |  |  |  |  |